

A
College Book of Prose

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SECOND EDITION

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PREFACE

THIS volume is not a survey of English prose but a textbook for college courses in composition. Its aim is to give you in your study of writing a collection of professional work for analysis and imitation. Robert Louis Stevenson advised all would-be writers to learn by "playing the sedulous ape." No better formula is likely to be found. Nor is it an accident that many of our contemporary authors began their careers as newspaper reporters. There is only one way to learn to write and that, unfortunately, is to do a great deal of writing. We have tried to smooth the way a little by providing readable and varied selections on topics which personally concern you: on college life, on your choice of a profession, on the likelihood of permanent peace, on friendship, marriage, music, literature, sports—topics which you probably will wish to choose as subjects for your own themes.

We assume that most college students have no intention of becoming professional authors. Your concern is mastery of clear English prose, to help you in your college courses and beyond. We have striven to meet your needs for models by reprinting both long and short selections, so as to provide examples of the structural organization demanded by these two types of composition. The student helps and theme suggestions printed at the close of the volume are not intended to be formal exercises; we hope they will set you thinking.

Our arrangement of selections from the great prose writers of the past side by side with articles by contemporary authors is not for the purpose of showing any evolutionary process but rather of helping you to see the continuity of human experience. Your problems have bedeviled many generations of men before you. The historical perspective you will gain from these selections should assist you to achieve balance of judgment in approaching today's problems.

S. W. S.

J. A. S.

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Autobiography

AUTOBIOGRAPHY • THOMAS HENRY HUXLEY

EARLY DAYS • MARK TWAIN

THESE CRUDE YOUNG MEN • BLISS PERRY

SEA CHANGE • BERTHA DAMON

THE FEEL • PAUL GALICO

AUTOBIOGRAPHY¹

Thomas Henry Huxley

And when I consider, in one view, the many things . . . which I have upon my hands, I feel the burlesque of being employed in this manner at my time of life. But, in another view, and taking in all circumstances, these things, as trifling as they may appear, no less than things of greater importance, seem to be put upon me to do.—Bishop Butler to the Duchess of Somerset

THE “many things” to which the Duchess’s correspondent here refers are the repairs and improvements of the episcopal seat at Auckland. I doubt if the great apologist, greater in nothing than in the simple dignity of his character, would have considered the writing an account of himself as a thing which could be put upon him to do whatever circumstances might be taken in. But the good bishop lived in an age when a man might write books and yet be permitted to keep his private existence to himself; in the pre-Boswellian epoch, when the germ of the photographer lay concealed in the distant future, and the interviewer who pervades our age was an unforeseen, indeed unimaginable, birth of time.

At present, the most convinced believer in the aphorism *Bene qui latuit, bene vixit*, is not always able to act up to it. An importunate person informs him that his portrait is about to be published and will be accompanied by a biography which the importunate person proposes to write. The sufferer knows what that means; either he undertakes to revise the “biography” or he does not. In the former case, he makes himself responsible; in the latter, he allows the publication of a mass of more or less fulsome inaccuracies for which he will be held responsible by those who are familiar with the prevalent art of self-advertisement. On the whole, it may be better to get over the “burlesque of being employed in this manner” and do the thing himself.

It was by reflections of this kind that, some years ago, I was led to write and permit the publication of the subjoined sketch.

I was born about eight o’clock in the morning on the 4th of May, 1825, at Ealing, which was, at that time, as quiet a little country village as could be found within a half-a-dozen miles of Hyde Park Corner. Now it is a suburb of London, with, I believe, 30,000 inhabitants. My father was one of the masters in a large semi-public school which at one time had a high reputation. I am not aware that any portents preceded my arrival in this world, but, in my childhood, I remember hearing a traditional account of the manner in which I lost the chance of an endowment of great practical value. The win-

¹Written in 1889.

dows of my mother's room were open, in consequence of the unusual warmth of the weather. For the same reason, probably, a neighbouring beehive had swarmed, and the new colony, pitching on the window-sill, was making its way into the room when the horrified nurse shut down the sash. If that well-meaning woman had only abstained from her ill-timed interference, the swarm might have settled on my lips, and I should have been endowed with that mellifluous eloquence which, in this country, leads far more surely than worth, capacity, or honest work, to the highest places in Church and State. But the opportunity was lost, and I have been obliged to content myself through life with saying what I mean in the plainest of plain language, than which, I suppose, there is no habit more ruinous to a man's prospects of advancement.

Why I was christened Thomas Henry I do not know; but it is a curious chance that my parents should have fixed for my usual denomination upon the name of that particular Apostle with whom I have always felt most sympathy. Physically and mentally I am the son of my mother so completely—even down to peculiar movements of the hands, which made their appearance in me as I reached the age she had when I noticed them—that I can hardly find any trace of my father in myself, except an inborn faculty for drawing, which unfortunately, in my case, has never been cultivated, a hot temper, and that amount of tenacity of purpose which unfriendly observers sometimes call obstinacy.

My mother was a slender brunette, of an emotional and energetic temperament, and possessed of the most piercing black eyes I ever saw in a woman's head. With no more education than other women of the middle classes in her day, she had an excellent mental capacity. Her most distinguishing characteristic, however, was rapidity of thought. If one ventured to suggest she had not taken much time to arrive at any conclusion, she would say, "I cannot, help it, things flash across me." That peculiarity has been passed on to me in full strength; it has often stood me in good stead; it has sometimes played me sad tricks, and it has always been a danger. But, after all, if my time were to come over again, there is nothing I would less willingly part with than my inheritance of mother wit.

I have next to nothing to say about my childhood. In later years my mother, looking at me almost reproachfully, would sometimes say, "Ah! you were such a pretty boy!" whence I had no difficulty in concluding that I had not fulfilled my early promise in the matter of looks. In fact, I have a distinct recollection of certain curls of which I was vain, and of a conviction that I closely resembled that handsome, courtly gentleman, Sir Herbert Oakley, who was vicar of our parish, and who was as a god to us country folk, because he was occasionally visited by the then Prince George of Cambridge. I remember

turning my pinafore wrong side forwards in order to represent a surplice, and preaching to my mother's maids in the kitchen as nearly as possible in Sir Herbert's manner one Sunday morning when the rest of the family were at church. That is the earliest indication I can call to mind of the strong clerical affinities which my friend Mr. Herbert Spencer has always ascribed to me, though I fancy they have for the most part remained in a latent state.

My regular school training was of the briefest, perhaps fortunately, for though my way of life has made me acquainted with all sorts and conditions of men, from the highest to the lowest, I deliberately affirm that the society I fell into at school was the worst I have ever known. We boys were average lads, with much the same inherent capacity for good and evil as any others; but the people who were set over us cared about as much for our intellectual and moral welfare as if they were baby-farmers. We were left to the operation of the struggle for existence among ourselves, and bullying was the least of the ill practices current among us. Almost the only cheerful reminiscence in connection with the place which arises in my mind is that of a battle I had with one of my classmates, who had bullied me until I could stand it no longer. I was a very slight lad, but there was a wild-cat element in me which, when roused, made up for lack of weight, and I licked my adversary effectually. However, one of my first experiences of the extremely rough-and-ready nature of justice, as exhibited by the course of things in general, arose out of the fact that I—the victor—had a black eye, while he—the vanquished—had none, so that I got into disgrace and he did not. We made it up, and thereafter I was unmolested. One of the greatest shocks I ever received in my life was to be told a dozen years afterwards by the groom who brought me my horse in a stable-yard in Sydney that he was my quondam antagonist. He had a long story of family misfortune to account for his position, but at that time it was necessary to deal very cautiously with mysterious strangers in New South Wales, and on inquiry I found that the unfortunate young man had not only been "sent out," but had undergone more than one colonial conviction.

As I grew older, my great desire was to be a mechanical engineer, but the fates were against this and, while very young, I commenced the study of medicine under a medical brother-in-law. But, though the Institute of Mechanical Engineers would certainly not own me, I am not sure that I have not all along been a sort of mechanical engineer *in partibus infidelium*. I am now occasionally horrified to think how very little I ever knew or cared about medicine as the art of healing. The only part of my professional course which really and deeply interested me was physiology, which is the mechanical engineering of living machines; and, notwithstanding that natural science has been my proper business, I am afraid there is very little of the genuine naturalist in me.

I never collected anything, and species work was always a burden to me; what I cared for was the architectural and engineering part of the business, the working out of the wonderful unity of plan in the thousands and thousands of diverse living constructions, and the modifications of similar apparatuses to serve diverse ends. The extraordinary attraction I felt towards the study of the intricacies of living structure nearly proved fatal to me at the outset. I was a mere boy—I think between thirteen and fourteen years of age—when I was taken by some older student friends of mine to the first *post-mortem* examination I ever attended. All my life I have been most unfortunately sensitive to the disagreeables which attend anatomical pursuits, but on this occasion my curiosity overpowered all other feelings, and I spent two or three hours in gratifying it. I did not cut myself, and none of the ordinary symptoms of dissection-poison supervened, but poisoned I was somehow, and I remember sinking into a strange state of apathy. By way of a last chance, I was sent to the care of some good, kind people, friends of my father's, who lived in a farmhouse in the heart of Warwickshire. I remember staggering from my bed to the window on the bright spring morning after my arrival, and throwing open the casement. Life seemed to come back on the wings of the breeze, and to this day the faint odor of wood-smoke, like that which floated across the farm-yard in the early morning, is as good to me as the "sweet south upon a bed of violets." I soon recovered, but for years I suffered from occasional paroxysms of internal pain, and from that time my constant friend, hypochondriacal dyspepsia, commenced his half century of co-tenancy of my fleshly tabernacle.

Looking back on my *Lehrjahre*, I am sorry to say that I do not think that any account of my doings as a student would tend to edification. In fact, I should distinctly warn ingenuous youth to avoid imitating my example. I worked extremely hard when it pleased me, and when it did not—which was a very frequent case—I was extremely idle (unless making caricatures of one's pastors and masters is to be called a branch of industry), or else wasted my energies in wrong directions. I read everything I could lay hands upon, including novels, and took up all sorts of pursuits to drop them again quite as speedily. No doubt it was very largely my own fault, but the only instruction from which I ever obtained the proper effect of education was that which I received from Mr. Wharton Jones, who was the lecturer on physiology at the Charing Cross School of Medicine. The extent and precision of his knowledge impressed me greatly, and the severe exactness of his method of lecturing was quite to my taste. I do not know that I have ever felt so much respect for anybody as a teacher before or since. I worked hard to obtain his approbation, and he was extremely kind and helpful to the youngster who, I am afraid,

took up more of his time than he had any right to do. It was he who suggested the publication of my first scientific paper—a very little one—in the *Medical Gazette* of 1845, and most kindly corrected the literary faults which abounded in it, short as it was; for at that time, and for many years afterwards, I detested the trouble of writing, and would take no pains over it.

It was in the early spring of 1846, that, having finished my obligatory medical studies and passed the first M.D. examination at the London University,—though I was still too young to qualify at the College of Surgeons—I was talking to a fellow-student (the present eminent physician, Sir Joseph Fayrer), and wondering what I should do to meet the imperative necessity for earning my own bread, when my friend suggested that I should write to Sir William Burnett, at that time Director-General for the Medical Service of the Navy, for an appointment. I thought this rather a strong thing to do, as Sir William was personally unknown to me, but my cheery friend would not listen to my scruples, so I went to my lodgings and wrote the best letter I could devise. A few days afterwards I received the usual official circular acknowledgment, but at the bottom there was written an instruction to call at Somerset House on such a day. I thought that looked like business, so at the appointed time I called and sent in my card, while I waited in Sir William's ante-room. He was a tall, shrewd-looking old gentleman, with a broad Scotch accent—and I think I see him now as he entered with my card in his hand. The first thing he did was to return it, with the frugal reminder that I should probably find it useful on some other occasion. The second was to ask whether I was an Irishman. I suppose the air of modesty about my appeal must have struck him. I satisfied the Director-General that I was English to the backbone, and he made some inquiries as to my student career, finally desiring me to hold myself ready for examination. Having passed this, I was in Her Majesty's Service, and entered on the books of Nelson's old ship, the *Victory*, for duty at Haslar Hospital, about a couple of months after I made my application.

My official chief at Haslar was a very remarkable person, the late Sir John Richardson, an excellent naturalist, and far-famed as an indomitable Arctic traveller. He was a silent, reserved man, outside the circle of his family and intimates; and, having a full share of youthful vanity, I was extremely disgusted to find that "Old John," as we irreverent youngsters called him, took not the slightest notice of my worshipful self either the first time I attended him, as it was my duty to do, or for some weeks afterwards. I am afraid to think of the lengths to which my tongue may have run on the subject of the churlishness of the chief, who was, in truth, one of the kindest-hearted and most considerate of men. But one day, as I was crossing the hospital square, Sir John stopped me, and heaped coals of fire on my head by telling me that

he had tried to get me one of the resident appointments, much coveted by the assistant surgeons, but that the Admiralty had put in another man. "However," said he, "I mean to keep you here till I can get you something you will like," and turned upon his heel without waiting for the thanks I stammered out. That explained how it was I had not been packed off to the West Coast of Africa like some of my juniors, and why, eventually, I remained altogether seven months at Haslar.

After a long interval, during which "Old John" ignored my existence almost as completely as before, he stopped me again as we met in a casual way, and describing the service on which the *Rattlesnake* was likely to be employed, said that Captain Owen Stanley, who was to command the ship, had asked him to recommend an assistant surgeon who knew something of science; would I like that? Of course I jumped at the offer. "Very well, I give you leave; go to London at once and see Captain Stanley." I went, saw my future commander, who was very civil to me, and promised to ask that I should be appointed to his ship, as in due time I was. It is a singular thing that, during the few months of my stay at Haslar, I had among my messmates two future Directors-General of the Medical Service of the Navy (Sir Alexander Armstrong and Sir John Watt-Reid), with the present President of the College of Physicians and my kindest of doctors, Sir Andrew Clark.

Life on board Her Majesty's ship in those days was a very different affair from what it is now, and ours was exceptionally rough, as we were often many months without receiving letters or seeing any civilised people but ourselves. In exchange, we had the interest of being about the last voyagers, I suppose, to whom it could be possible to meet with people who knew nothing of fire-arms—as we did on the south coast of new Guinea—and of making acquaintance with a variety of interesting savage and semi-civilised people. But, apart from experience of this kind and the opportunities offered for scientific work, to me, personally, the cruise was extremely valuable. It was good for me to live under sharp discipline; to be down on the realities of existence by living on bare necessities; to find out how extremely well worth living life seemed to be when one woke up from a night's rest on a soft plank, with the sky for canopy and cocoa and weevilly biscuit the sole prospect for breakfast; and, more especially, to learn to work for the sake of what I got for myself out of it, even if it all went to the bottom and I along with it. My brother officers were as good fellows as sailors ought to be and generally are, but naturally, they neither knew nor cared anything about my pursuits, nor understood why I should be so zealous in pursuit of the objects which my friends, the middies, christened "Buffons," after the title conspicuous on a volume of the *Suites à Buffon*, which stood on my shelf in the chart room.

During the four years of our absence, I sent home communication after communication to the "Linnean Society," with the same result as that obtained by Noah when he sent the raven out of his ark. Tired at last of hearing nothing about them, I determined to do or die, and in 1849 I drew up a more elaborate paper and forwarded it to the Royal Society. This was my dove, if I had only known it. But owing to the movements of the ship, I heard nothing of that either until my return to England in the latter end of the year 1850, when I found that it was printed and published, and that a huge packet of separate copies awaited me. When I hear some of my young friends complain of want of sympathy and encouragement, I am inclined to think that my naval life was not the least valuable part of my education.

Three years after my return were occupied by a battle between my scientific friends on the one hand and the Admiralty on the other, as to whether the latter ought, or ought not, to act up to the spirit of a pledge they had given to encourage officers who had done scientific work by contributing to the expense of publishing mine. At last the Admiralty, getting tired, I suppose, cut short the discussion by ordering me to join a ship, which thing I declined to do, and as Rastignac, in the *Père Goriot* says to Paris, I said to London "*à nous deux.*" I desired to obtain a Professorship of either Physiology or Comparative Anatomy, and as vacancies occurred I applied, but in vain. My friend, Professor Tyndall, and I were candidates at the same time, he for the Chair of Physics and I for that of Natural History in the University of Toronto, which, fortunately, as it turned out, would not look at either of us. I say fortunately, not from any lack of respect for Toronto, but because I soon made up my mind that London was the place for me, and hence I have steadily declined the inducements to leave it, which have at various times been offered. At last, in 1854, on the translation of my warm friend Edward Forbes, to Edinburgh, Sir Henry de la Beche, the Director-General of the Geological Survey, offered me the post Forbes vacated of Paleontologist and Lecturer on Natural History. I refused the former point blank, and accepted the latter only provisionally, telling Sir Henry that I did not care for fossils, and that I should give up Natural History as soon as I could get a physiological post. But I held the office for thirty-one years, and a large part of my work has been paleontological.

At that time I disliked public speaking, and had a firm conviction that I should break down every time I opened my mouth. I believe I had every fault a speaker could have (except talking at random or indulging in rhetoric), when I spoke to the first important audience I ever addressed, on a Friday evening at the Royal Institution, in 1852. Yet, I must confess to having been guilty, *malgré moi*, of as much public speaking as most of my contemporaries,

and for the last ten years it ceased to be so much of a bugbear to me. I used to pity myself for having to go through this training, but I am now more disposed to compassionate the unfortunate audiences, especially my ever friendly hearers at the Royal Institution, who were the subjects of my oratorical experiments.

The last thing that it would be proper for me to do would be to speak of the work of my life, or to say at the end of the day whether I think I have earned my wages or not. Men are said to be partial judges of themselves. Young men may be, I doubt if old men are. Life seems terribly foreshortened as they look back and the mountain they set themselves to climb in youth turns out to be a mere spur of immeasurably higher ranges when, by failing breath, they reach the top. But if I may speak of the objects I have had more or less definitely in view since I began the ascent of my hillock, they are briefly these: To promote the increase of natural knowledge and to forward the application of scientific methods of investigation to all the problems of life to the best of my ability, in the conviction which has grown with my growth and strengthened with my strength, that there is no alleviation for the sufferings of mankind except veracity of thought and of action, and the resolute facing of the world as it is when the garment of make-believe by which pious hands have hidden its uglier features is stripped off.

It is with this intent that I have subordinated any reasonable, or unreasonable, ambition for scientific fame which I may have permitted myself to entertain to other ends; to the popularization of science; to the development and organisation of scientific education; to the endless series of battles and skirmishes over evolution; and to untiring opposition to that ecclesiastical spirit, that clericalism, which in England, as everywhere else, and to whatever denomination it may belong, is the deadly enemy of science.

In striving for the attainment of these objects, I have been but one among many, and I shall be well content to be remembered, or even not remembered, as such. Circumstances, among which I am proud to reckon the devoted kindness of many friends, have led to my occupation of various prominent positions, among which the Presidency of the Royal Society is the highest. It would be mock modesty on my part, with these and other scientific honours which have been bestowed upon me, to pretend that I have not succeeded in the career which I have followed, rather because I was driven into it than of my own free will; but I am afraid I should not count even these things as marks of success if I could not hope that I had somewhat helped that movement of opinion which has been called the New Reformation.

EARLY DAYS¹

Mark Twain

MY PARENTS removed to Missouri in the early 'thirties; I do not remember just when, for I was not born then and cared nothing for such things. It was a long journey in those days, and must have been a rough and tiresome one. The home was made in the wee village of Florida, in Monroe County, and I was born there in 1835. The village contained a hundred people and I increased the population by 1 per cent. It is more than many of the best men in history could have done for a town. It may not be modest in me to refer to this, but it is true. There is no record of a person doing as much—even Shakespeare. But I did it for Florida, and it shows that I could have done it for any place—even London, I suppose.

Recently some one in Missouri has sent me a picture of the house I was born in. Heretofore I have always stated that it was a palace, but I shall be more guarded now.

I used to remember my brother Henry walking into a fire outdoors when he was a week old. It was remarkable in me to remember a thing like that, and it was still more remarkable that I should cling to the delusion, for thirty years, that I *did* remember it—for of course it never happened; he would not have been able to walk at that age. If I had stopped to reflect, I should not have burdened my memory with that impossible rubbish so long. It is believed by many people that an impression deposited in a child's memory within the first two years of its life cannot remain there five years, but that is an error. The incident of Benvenuto Cellini and the salamander must be accepted as authentic and trustworthy; and then that remarkable and indisputable instance in the experience of Helen Keller—However, I will speak of that at another time. For many years I believed that I remembered helping my grandfather drink his whisky toddy when I was six weeks old, but I do not tell about that any more, now; I am grown old and my memory is not as active as it used to be. When I was younger I could remember anything, whether it had happened or not; but my faculties are decaying now, and soon I shall be so I cannot remember any but the things that never happened. It is sad to go to pieces like this, but we all have to do it.

My uncle, John A. Quarles, was a farmer, and his place was in the country four miles from Florida. He had eight children and fifteen or twenty negroes, and was also fortunate in other ways, particularly in his character. I have not come across a better man than he was. I was his guest for two or three months

¹From *Mark Twain's Autobiography* by Samuel Langhorne Clemens. Published in 1924, fourteen years after the death of Mark Twain. Harper & Brothers, publishers.

every year, from the fourth year after we removed to Hannibal till I was eleven or twelve years old. I have never consciously used him or his wife in a book, but his farm has come very handy to me in literature once or twice. In *Huck Finn* and in *Tom Sawyer, Detective* I moved it down to Arkansas. It was all of six hundred miles, but it was no trouble; it was not a very large farm—five hundred acres, perhaps—but I could have done it if it had been twice as large. And as for the morality of it, I cared nothing for that; I would move a state if the exigencies of literature required it.

It was a heavenly place for a boy, that farm of my uncle John's. The house was a double log one, with a spacious floor (roofed in) connecting it with the kitchen. In the summer the table was set in the middle of that shady and breezy floor, and the sumptuous meals—well, it makes me cry to think of them. Fried chicken, roast pig; wild and tame turkeys, ducks, and geese, venison just killed; squirrels, rabbits, pheasants, partridges, prairie-chickens; biscuits, hot batter cakes, hot buckwheat cakes, hot "wheat bread," hot rolls, hot corn pone; fresh corn boiled on the ear, succotash, butter-beans, stringbeans, tomatoes, peas, Irish potatoes, sweet potatoes; buttermilk, sweet milk, "clabber"; water-melons, muskmelons, cantaloupes—all fresh from the garden; apple pie, peach pie, pumpkin pie, apple dumplings, peach cobbler—I can't remember the rest. The way that the things were cooked was perhaps the main splendor—particularly a certain few of the dishes. For instance, the corn bread, the hot biscuits and wheat bread, and the fried chicken. These things have never been properly cooked in the North—in fact, no one there is able to learn the art, so far as my experience goes. The North thinks it knows how to make corn bread, but this is mere superstition. Perhaps no bread in the world is quite so good as Southern corn bread, and perhaps no bread in the world is quite so bad as the Northern imitation of it. The North seldom tries to fry chicken, and this is well; the art cannot be learned north of the line of Mason and Dixon, nor anywhere in Europe. This is not hearsay; it is experience that is speaking. In Europe it is imagined that the custom of serving various kinds of bread blazing hot is "American," but that is too broad a spread; it is custom in the South, but is much less than that in the North. In the North and in Europe hot bread is considered unhealthy. This is probably another fussy superstition, like the European superstition that ice-water is unhealthy. Europe does not need ice-water and does not drink it; and yet, notwithstanding this, its word for it is better than ours, because it describes it, whereas ours doesn't. Europe calls it "iced" water. Our word describes water made from melted ice—a drink which has a characterless taste and which we have but little acquaintance with.

It seems a pity that the world should throw away so many good things merely because they are unwholesome. I doubt if God has given us any

refreshment which, taken in moderation, is unwholesome, except microbes. Yet there are people who strictly deprive themselves of each and every eatable, drinkable, and smokable which has in any way acquired a shady reputation. They pay this price for health. And health is all they get for it. How strange it is! It is like paying out your whole fortune for a cow that has gone dry.

The farmhouse stood in the middle of a very large yard, and the yard was fenced on three sides with rails and on the rear side with high palings; against these stood the smoke-house; beyond the palings was the orchard; beyond the orchard were the negro quarters and the tobacco fields. The front yard was entered over a stile made of sawed-off logs of graduated heights; I do not remember any gate. In a corner of the front yard were a dozen lofty hickory trees and a dozen black walnuts, and in the nutting season riches were to be gathered there.

Down a piece, abreast the house, stood a little log cabin against the rail fence; and there the woody hill fell sharply away, past the barns, the corn-crib, the stables, and the tobacco-curing house, to a limpid brook which sang along over its gravelly bed and curved and frisked in and out and here and there and yonder in the deep shade of overhanging foliage and vines—a divine place for wading, and it had swimming pools, too, which were forbidden to us and therefore much frequented by us. For we were little Christian children and had early been taught the value of forbidden fruit.

In the little log cabin lived a bedridden whiteheaded slave woman whom we visited daily and looked upon with awe, for we believed she was upward of a thousand years old and had talked with Moses. The younger negroes credited these statistics and had furnished them to us in good faith. We accommodated all the details which came to us about her; and so we believed that she had lost her health in the long desert trip coming out of Egypt, and had never been able to get it back again. She had a round bald place on the crown of her head, and we used to creep around and gaze at it in reverent silence, and reflect that it was caused by fright through seeing Pharaoh drowned. We called her "Aunt" Hannah, Southern fashion. She was superstitious, like the other negroes; also, like them, she was deeply religious. Like them, she had great faith in prayer and employed it in all ordinary exigencies, but not in cases where a dead certainty of result was urgent. Whenever witches were around she tied up the remnant of her wool in little tufts, with white thread, and this promptly made the witches impotent.

All the negroes were friends of ours, and with those of our own age we were in effect comrades. I say in effect, using the phrase as a modification. We were comrades, and yet not comrades; color and condition interposed a subtle line which both parties were conscious of and which rendered complete

fusion impossible. We had a faithful and affectionate good friend, ally, and adviser in "Uncle Dan'l," a middle-aged slave whose head was the best one in the negro quarter, whose sympathies were wide and warm, and whose heart was honest and simple and knew no guile. He has served me well these many, many years. I have not seen him for more than half a century, and yet spiritually I have had his welcome company a good part of that time, and have staged him in books under his own name and as "Jim," and carted him all around—to Hannibal, down the Mississippi on a raft, and even across the Desert of Sahara in a balloon—and he has endured it all with the patience and friendliness and loyalty which were his birthright. It was on the farm that I got my strong liking for his race and my appreciation of certain of its fine qualities. This feeling and this estimate have stood the test of sixty years and more, and have suffered no impairment. The black face is as welcome to me now as it was then.

In my schoolboy days I had no aversion to slavery. I was not aware that there was anything wrong about it. No one arraigned it in my hearing; the local papers said nothing against it; the local pulpit taught us that God approved it; that it was a holy thing, and that the doubter need only look in the Bible if he wished to settle his mind—and then the texts were read aloud to us to make the matter sure; if the slaves themselves had an aversion to slavery, they were wise and said nothing. In Hannibal we seldom saw a slave misused; on the farm, never.

There was, however, one small incident of my boyhood days which touched this matter, and it must have meant a good deal to me or it would not have stayed in my memory, clear and sharp, vivid and shadowless, all these slow-drifting years. We had a little slave boy whom we had hired from some one, there in Hannibal. He was from the eastern shore of Maryland, and had been brought away from his family and his friends, halfway across the American continent, and sold. He was a cheery spirit, innocent and gentle, and the noisiest creature that ever was, perhaps. All day long he was singing, whistling, yelling, whooping, laughing—it was maddening, devastating, unendurable. At last, one day, I lost all my temper, and went raging to my mother and said Sandy had been singing for an hour without a single break, and I couldn't stand it, and *wouldn't* she please shut him up. The tears came into her eyes and her lip trembled, and she said something like this:

"Poor thing, when he sings it shows that he is not remembering, and that comforts me; but when he is still I am afraid he is thinking, and I cannot bear it. He will never see his mother again; if he can sing, I must not hinder it, but be thankful for it. If you were older, you would understand me; then that friendless child's noise would make you glad."

It was a simple speech and made up of small words, but it went home, and Sandy's noise was not a trouble to me any more. She never used large words, but she had a natural gift for making small ones do effective work. She lived to reach the neighborhood of ninety years and was capable with her tongue to the last—especially when a meanness or an injustice roused her spirit. She has come handy to me several times in my books, where she figures as Tom Sawyer's Aunt Polly. I fitted her out with a dialect and tried to think up other improvements for her, but did not find any. I used Sandy once, also; it was in *Tom Sawyer*. I tried to get him to whitewash the fence, but it did not work. I do not remember what name I called him by in the book.

I can see the farm yet, with perfect clearness. I can see all its belongings, all its details; the family room of the house, with a "trundle" bed in one corner and a spinning-wheel in another—a wheel whose rising and falling wail, heard from a distance, was the mournfulest of all sounds to me, and made me homesick and low spirited, and filled my atmosphere with the wandering spirits of the dead; the vast fireplace, piled high, on winter nights, with flaming hickory logs from whose ends a sugary sap bubbled out, but did not go to waste, for we scraped it off and ate it; the lazy cat spread out on the rough hearthstones; the drowsy dogs braced against the jambs and blinking; my aunt in one chimney corner, knitting; my uncle in the other, smoking his corn-cob pipe; the slick and carpetless oak floor faintly mirroring the dancing flame tongues and freckled with black indentations where fire coals had popped out and died a leisurely death; half a dozen children romping in the background twilight; "split"-bottomed chairs here and there, some with rockers; a cradle—out of service, but waiting, with confidence; in the early cold mornings a snuggle of children, in shirts and chemises, occupying the hearthstone and procrastinating—they could not bear to leave that comfortable place and go out on the windswept floor space between the house and kitchen where the general tin basin stood, and wash.

Along outside of the front fence ran the country road, dusty in the summertime, and a good place for snakes—they liked to lie in it and sun themselves; when they were rattlesnakes or puff adders, we killed them; when they were black snakes, or racers, or belonged to the fabled "hoop" breed, we fled, without shame; when they were "house snakes," or "garters," we carried them home and put them in Aunt Patsy's work basket for a surprise; for she was prejudiced against snakes, and always when she took the basket in her lap and they began to climb out of it it disordered her mind. She never could seem to get used to them; her opportunities went for nothing. And she was always cold toward bats, too, and could not bear them; and yet I think a bat is as friendly a bird as there is. My mother was Aunt Patsy's sister and had the same wild super-

stitutions. A bat is beautifully soft and silky; I do not know any creature that is pleasanter to the touch or is more grateful for caressings, if offered in the right spirit. I know all about these coleoptera, because our great cave, three miles below Hannibal, was multitudinously stocked with them, and often I brought them home to amuse my mother with. It was easy to manage if it was a school day, because then I had ostensibly been to school and hadn't any bats. She was not a suspicious person, but full of trust and confidence; and when I said, "There's something in my coat pocket for you," she would put her hand in. But she always took it out again, herself; I didn't have to tell her. It was remarkable, the way she couldn't learn to like private bats. The more experience she had, the more she could not change her views.

Down the forest slopes to the left were the swings. They were made of bark stripped from hickory saplings. When they became dry they were dangerous. They usually broke when a child was forty feet in the air, and this was why so many bones had to be mended every year. I had no ill luck myself, but none of my cousins escaped. There were eight of them, and at one time and another they broke fourteen arms among them. But it cost next to nothing, for the doctor worked by the year—twenty-five dollars for the whole family. I remember two of the Florida doctors, Chowning and Meredith. They not only tended an entire family for twenty-five dollars a year, but furnished the medicines themselves. Good measure, too. Only the largest persons could hold a whole dose. Castor oil was the principal beverage. The dose was half a dipperful, with half a dipperful of New Orleans molasses added to help it down and make it taste good, which it never did. The next standby was calomel; the next, rhubarb; and the next, jalap. Then they bled the patient, and put mustard plasters on him. It was a dreadful system, and yet the death rate was not heavy. The calomel was nearly sure to salivate the patient and cost him some of his teeth. There were no dentists. When teeth became touched with decay or were otherwise ailing, the doctor knew of but one thing to do—he fetched his tongs and dragged them out. If the jaw remained, it was not his fault. Doctors were not called in cases of ordinary illness; the family grandmother attended to those. Every old woman was a doctor, and gathered her own medicines in the woods, and knew how to compound doses that would stir the vitals of a cast-iron dog. And then there was the "Indian doctor"; a grave savage, remnant of his tribe, deeply read in the mysteries of nature and the secret properties of herbs; and most backwoodsmen had high faith in his powers and could tell of wonderful cures achieved by him. In Mauritius, away off yonder in the solitudes of the Indian Ocean, there is a person who answers to our Indian doctor of the old times. He is a negro, and has had no teaching as a doctor, yet there is one disease which he is master of and can

cure and the doctors can't. They send for him when they have a case. It is a child's disease of a strange and deadly sort, and the negro cures it with a herb medicine which he makes, himself, from a prescription which has come down to him from his father and grandfather. He will not let anyone see it. He keeps the secret of its components to himself, and it is feared that he will die without divulging it; then there will be consternation in Mauritius. I was told these things by the people there, in 1896.

We had the "faith doctor," too, in those early days—a woman. Her specialty was toothache. She was a farmer's old wife and lived five miles from Hannibal. She would lay her hand on the patient's jaw and say, "Believe!" and the cure was prompt. Mrs. Utterback. I remember her very well. Twice I rode out there behind my mother, horseback, and saw the cure performed. My mother was the patient.

Doctor Meredith removed to Hannibal, by and by, and was our family physician there, and saved my life several times. Still, he was a good man and meant well. Let it go.

I was always told that I was a sickly and precarious and tiresome and uncertain child, and lived mainly on allopathic medicines during the first seven years of my life. I asked my mother about this, in her old age—she was in her eighty-eighth year—and said:

"I suppose that during all that time you were uneasy about me?"

"Yes, the whole time."

"Afraid I wouldn't live?"

After a reflective pause—ostensibly to think out the facts—"No—afraid you would."

THESE CRUDE YOUNG MEN¹

Bliss Perry

HALF the advantage of going to college lies in going away to college. Your mother packs your trunk, your father gives you his blessing and some money, and you are off, like the hero of a picaresque novel, to make your own way in the world. To my sister Grace, who left for Wellesley just as I was entering Williams, college was a romantic adventure. "Pioneers, O Pioneers!"

For me it meant loading a little furniture into the lumber wagon and driving across the field where the Thompson Laboratories now stand to the

¹From *And Gladly Teach*, by Bliss Perry. Houghton Mifflin Company, publishers, 1935.

south entry of West College, on whose fourth floor I was to room for the next four years, taking my meals at home. It was the only sensible thing to do, for an old law of Williams allowed free tuition to the sons of professors. Father, with five boys to educate, and Professor Safford, with four, were the most obvious beneficiaries of this ancient statute. I admired Father's pioneering energy in seeking out Mark Hopkins's college for himself, instead of following his own father's example and going to Harvard. I still like to meet men who tell me that they went to Amherst because Garman taught there, or to Bowdoin for Hyde, or to Yale for "Billy" Sumner, or Stanford for David Starr Jordan. It makes education seem real. In my student days in Germany, men were constantly migrating from one university to another in order to get the benefit of some particular course offered that year by a famous scholar. For men mature enough to know what they want, all this is admirable; but it is fairly certain that not one out of ten American freshmen knows what he wants or where he can find it.

So all the Perry and Safford boys, aware that the paternal salary never exceeded twenty-five hundred dollars, went cheerfully to Williams; and there was one period of fourteen years when either a Safford or a Perry, or both, ornamented the college nine. But we could scarcely feel that romantic glamour about Williams which many of our classmates experienced. We had been born and bred in that briar bush. Still, we thought it as good as any other, and indeed it was, for most of us; though we were informed occasionally that a gifted and ambitious boy might be better off at Harvard, where the youthful President Eliot was introducing some very radical ideas. . . .

The studies of our freshman year . . . were the immemorial Latin, Greek, and mathematics. The fifty or more boys in our class recited in each of these subjects every day. There were no sections; good, bad, and indifferent students had precisely the same assignments and were called up in turn. We were doing, literally, what our fathers had done before us. My first Latin lesson, in the preface to Livy, was, as I discovered later in Father's diary, exactly the same assignment which he had had in 1848; and it was also precisely what my son had at Williams as a freshman in 1916. For sixty-eight years at least, and probably much longer, it was the same squirrel in the same cage! One would think that some Professor of Latin, at some time, in an access of emotional insanity might have altered the assignment, even if he kept the dreadful secret to himself.

The theory was, of course, that what freshmen needed was grammatical drill, and that certain Latin and Greek texts were convenient, not to say hallowed implements for this purpose. The irony of the situation was that some of us actually liked Latin and Greek, loved to turn those splendid periods into

the best English which we could command, and were ready to be interested in whatever the Greeks and Romans had to say. But we fared less well in the classroom than some boy with an accurate verbal memory for the list of rules and exceptions as set down in the grammars of Goodwin and Allen and Greenough. I had been captivated in school by the poetry of Virgil. That meant to me the six books of the *Aeneid* that were then required, but I cannot recall that any teacher informed me that Virgil had ever written anything but those six books. What Virgil's real place was in Roman literature and in world literature was never mentioned. I liked to read Horace, and a knowledge of the scansion certainly increased my sense of his cleverness, but in the college classroom his wit and wisdom seemed to evaporate, and there was only the grammar and scansion left. The extracts which we read from Thucydides and Herodotus were interesting, but we were warned never to use "ponies," and no one hinted to us that we would do well to read in an English translation the entire work of these or any other Greek authors. Professor Fernald was an admirable drillmaster in the rudiments of the Greek language, but his conscientious interpretation of his duty as a teacher left him no time to initiate us into the wonders of Greek literature—even in an English dress.

I obeyed strictly that rule forbidding the use of translations. When we came to read Cicero's *Letters*—for which no "pony" was available—many of my friends were in sore trouble. I have lived long enough to hear Cicero described today as a "stuffed shirt," but I found his *Letters* amusing and eloquent, and I wish that as an undergraduate I could have had Gaston Boissier's *Cicéron et ses Amis*, which I remember reading with my children one winter in Rome. But I had four classmates who could not read a sentence of the *Letters* without a translation, though they knew their Latin grammar well enough. We were then reciting to Professor E. H. Griffin at five in the afternoon. I used to come up from baseball practice about four, and having then a knack for fluent though somewhat inaccurate reading of Latin at sight, I would translate Cicero's *Letters* to my four grammatical classmates. I do not doubt that my Latinity was much like David Garrick's. "He has not Latin enough," declared Samuel Johnson, who had once taught "Davy." "He finds out the Latin by the meaning rather than the meaning by the Latin." At any rate, that was what Professor Griffin evidently thought of me, for at the end of the term all of my four friends received a better grade in Latin than I did. . . .

Enough, however, of Greek and Latin! Our third subject was mathematics, in which we were instructed, in a gloomy basement room of the old gymnasium, by Professor Dodd. "In his younger days," as I have written elsewhere, "he had been a Latinist, until the loss, by fire, of his manuscript Latin grammar disheartened him, and he accepted a chair of elementary mathematics, which

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he kept till his death. He fulfilled his duties as instructor with perfect gravity and fidelity, but cared wholly for other things: for his collections of Phaedrus and black-letter Chaucers; for Scott's novels, which he used to read through once each year; for the elder dramatists; for Montaigne and Lamb. Weather permitting, he drove from twenty to forty miles a day in his rusty, mud-covered buggy; he knew every wild flower, every lovely or bold view, within reach of Williamstown. To be his companion upon one of these drives was to touch the very essence of fine, whimsical, irresponsible scholarship."

But to us freshmen he appeared to be simply a taskmaster. The system by which, irrespective of our training and aptitudes, we were all herded together in one classroom, was not of his devising. He was himself performing an uncongenial duty, and he did not see why we should not perform ours. We had a few brilliant mathematicians who used to annoy him purposely by substituting original demonstrations in place of those given in Loomis. We had one man, at least, who had no conception whatever of the meaning of geometry, but whose verbal memory was so remarkable that he could recite every proposition by heart. Dodd gave him a high mark and he ultimately became a bishop.

Yet one adventure of my own in his classroom may serve to illustrate Professor Dodd's wisdom and patience in handling a sulky boy. I disliked mathematics intensely, and aimed to do just enough work to secure a passing grade. One day, in our study of trigonometry, he told us to be ready to box the compass. It did not involve ten minutes of work, but I balked at it, holding that boxing the compass was a sheer mechanical exercise, beneath the dignity of a college classroom. Dodd called us up by lot—or at least pretended to so do—for we were never certain that the name written on a piece of paper and drawn from his pasteboard box was the name which he actually announced. At any rate, "Perry" was the first name called to box the compass. I rose decorously, shook my head firmly, and sat down. It meant a "zero." For six days running, this little ceremony was repeated, to the delight of the class. Then I consulted the oracle of the coal-closet, for on the inside of that closet door in No. 32 West College I kept a careful record of my "zeros" and "x's" under Dodd. Those six "zeros" in a row looked as big as the national debt, and a very few minutes of applied mathematics proved to me that I could not afford to take another one if I wished to pass the course. Accordingly on the seventh day, when the Professor began the hour by inquiring mildly, in his queer throaty voice: "Perry, are you ready to box the compass for us today?" I boxed it, amid great applause. Dodd twinkled, but said nothing; he knew all along that he held the winning card.

Our life in West College, as in the other dormitories of that period, was

primitive enough to have satisfied Rousseau. In fact, we may almost be said to have lived like the beasts that perish. There was no water except what we carried up in pitchers from an outside pump. It may be imagined that we carried as little as possible. Even in the gymnasium, which I frequented for four winters to keep in training for baseball, there were only three or four hand-basins for washing. "Showers" had not been invented, and there was neither water nor money for tubs. We had to provide ourselves with coal stoves, as no dormitory was heated. There was no service of any kind, except that ash-cans and slop-pails were placed in the hallway of each floor, to be emptied whenever the college janitor got around to it. If we chose to sweep our rooms occasionally and make up our beds, we did so; but this was a matter of individual taste rather than prescription. Carpets were a rare luxury: I had an oilcloth to cover the middle of the room, a table with a kerosene "student-lamp," two or three chairs, a bookcase, and a few prints.

But happiness, as many an unwashed philosopher has pointed out, does not depend upon furnishings. We had youth and health and high spirits. I fear we kicked too many ash-cans and pails downstairs; and since our fathers were charged two dollars a term for any windows we might break and we considered this charge an economic outrage, we took pains to smash, each term, two dollars' worth of glass, very roughly calculated. Carpenter Clark, in deep gloom, described a student as "a window-breaking animal." That was also the opinion of Dr. Chadbourne, who lived in the beautiful President's House opposite West College. The favorite sport of the denizens of the north entry of West College was to smash a few panes of glass, start the ash-cans rolling, blow a tin horn, and yell "Chad!" Instantly, at any hour of the day or night, the President would jump out of his front door like a "jack-in-the-box," gold-headed cane in hand, his eyes blazing behind his gold-rimmed glasses, and his beard and coat-tails flying all abroad. If he caught a student he would expel him on the spot, though he usually took him back, with the kindest admonitions, the next morning. I used to wonder that it never seemed to occur to so bright a man that, if he simply stayed in his study, our whole game would be spoiled. He thought himself, however, a masterful disciplinarian, and that the secret of discipline was in threats. He was the first President of Williams to take any interest in the beauty of the college grounds, but his method of persuading undergraduates to share his desire for better lawns was simply to post notices: "Keep off the Grass." We had never heard of such a thing, and those words became, alas, the unofficial motto of his administration! Professors were expected to act as policemen. A few years later, at Princeton, when the same question arose of protecting the lawns against the ball-playing and short-cut propensities of undergraduates, I heard President

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Patton drawl out indolently but with finality: "Are not pleasant relations between students and faculty more important than a little grass?"

It was fortunate that most of our surplus energy went into athletics rather than mischief. Williams had given up intercollegiate rowing, and organized football was still a thing of the future, but everyone played baseball after a fashion, and it is impossible to convey to a present-day undergraduate the enthusiasm which we felt for it. The annual "horn-game" between freshmen and sophomores, when tin horns and monstrous "devil's fiddles" were used by each class to rattle the opposing team, was the chief athletic event of the year—more important, in fact, than the "college" nine's games with Amherst. I happened to be captain of our class team, and caught. The mask, invented by Thayer of Harvard, was just coming into use, but the first models had brittle wire and were likely to be broken by a foul tip. Otherwise the catcher had no protection whatever: neither chest pad nor shin-guards nor even a regulation glove, though many catchers bought a pair of farmers' buckskin gloves, cutting off the fingers of the left-hand glove, and padding the palm with a handkerchief. This helped a little, but not much. Fielders' gloves were unknown, and most of us carried bone-bruises from one end of the season to the other. Pitchers were beginning to work the curve ball, though still compelled to throw underhand, at a distance of only forty-five feet from the plate. There was no coaching except what the captain ventured to offer, and he had to be tactful about that; and there was no medical or other supervision. If we were hurt, we were hurt. I still carry the scar of a left finger badly broken by a foul tip; I remember pushing the bone back under the skin, wrapping a handkerchief around it and playing the game out, since we had no other catcher. It was boyish folly, of course, but any one of us would have preferred to lose a finger rather than lose a ball game.

We formed our own social groups with entire freedom. There was of course, among the freshmen, a "West College crowd," a "South College crowd," and so on; but these associations were spontaneous and flexible. The Greek letter fraternities, which since our time have assumed great prominence in the social life of Williams, were then a minor matter. There was no organized "rushing season," and though a few freshmen were pledged in advance, not more than a third of each class—and those mainly the wealthier men—joined the fraternities. The rest of us were called "neutrals," and though we indulged in occasional satire upon what we considered the snobbishness of awarding a claim for social distinction upon a cash basis, there was little heart-burning over it, and no apparent effect upon class politics or individual popularity. The question of remaining a "neutral" was simplified for me by

Father's attitude. As an undergraduate he had been a charter member of Alpha Delta Phi, but twenty-five years of observation had convinced him, rightly or wrongly, that the fraternities did more harm than good, and he directed his sons not to accept an invitation. By the time his youngest boy entered college, Father had retired from teaching and relaxed his rule; so that Lewis, who had already been excused from learning to milk (the only real blot upon his career, in the opinion of his older brothers!), was allowed the additional indulgence of joining a fraternity.

There were, however, two other undergraduate organizations (both of them now extinct) which I joined early and greatly enjoyed: the Lyceum of Natural History, and the Philologian Literary Society. The "L.N.H." had had an honorable history, had sent out the first scientific expedition ever attempted by an American college, and had helped to train many distinguished naturalists. . . . As Professor Tenney's chair had not been filled, we were obliged to work without any supervision, but we had rooms in Jackson Hall, and free access to the zoological collections. We organized our own field work, wrote reports, and tried our hand at dissections. I spent a good deal of time trying to learn to mount birds, but I had no real instruction in that art, and finally, after removing the skin from a great blue heron—a rank feeder on frogs and fish, and quite too "high" when it was brought in—I abandoned the effort in disgust.

The rivalry between the Philologian and Philotechnian literary societies had once been intense, and freshmen had been pledged to one or the other before entering college. I "went" Philologian, like my father. Each society had pleasant rooms in South College, with excellent libraries, which were then more used by undergraduates than the college library. At the weekly meetings there were essays, orations, and debates. We elected an undergraduate "critic," who was usually merciless. I debated with zeal throughout my college course, and was thought by my classmates to have uncanny luck in being on the winning side. As a matter of fact I had a "system," whose secret I guarded as closely as I had once guarded old Hadsell's "side-holt." It was very simple. In a small college you knew rather accurately the mental habits of each of your opponents in debate. If the other boy was likely to spend two hours in preparation, I spent four; if he spent ten, I would spend twenty. It worked. Not long ago, I explained this "system" to a group of Harvard intercollegiate debaters, but it did not seem to impress them. They had hoped I would talk about the "strategy" and "tactics" of debating—which are indeed interesting enough; but if you have mastered a particular subject twice as well as the other fellow, you may not need any strategy in order to smash him. Alas, how fluent and cocksure I was in those old debating days, and when we Philologists man-

handled the Philotechnians in joint debates—the smiling Mark Hopkins acting as judge, as he did in my father's time—how ineffably proud we were! It seemed almost as important, though perhaps not quite, as banging out a base-hit when a hit was needed.

At the end of freshman year, I was promoted to the "college" or varsity nine, and usually played third base thereafter. Bowdoin, Union, and Amherst were about the only colleges we played, though some of our keenest games were with semi-professional teams from manufacturing towns near-by, like Hoosac Falls, Blackinton, North Adams, and Renfrew. We had both a spring and a fall season, and toward the end of my senior year I discovered that baseball was taking a great deal of time. For four years I had scarcely gone trout-fishing or mountain-climbing except in vacations, and now I had developed a sudden passion for archery. I explained this to Captain Fred Fox at the close of a Saturday game, and resigned from the team. The Amherst game was only two or three weeks away. Fox was a taciturn fellow, and one of my best friends, but when I mentioned the claims of archery, he found plenty of words for once, and on Monday I was the first man to report for practice. I think I have wanted few things in life more ardently than to make a hit the last time I came to bat in college. I got it—and then an extra game was scheduled, and I had to get it all over again. Even now, after more than half a century, I have vivid dreams of those old strains and chances and mischances of the game. When the Boston Symphony Orchestra played *Till Eulenspiegel* for the first time in Cambridge, a very musical lady declared that there were only two men in Sanders Theatre who smiled at the right moments, Professor Münsterberg and myself. I did not dare to confess to her that I was really one hundred and forty miles distant from the music, playing over again a ball game against Renfrew, where I came in very fast from third base to field a bunt and missed it altogether! What Münsterberg may have been thinking of, I cannot say.

Our classroom work in the sophomore and junior years gained somewhat in interest and variety. The elective system had not then been introduced, except that a few choices were offered, as for instance between French and German. . . .

I chose German rather than French. Professor Gilson, a lame man with a dark, silky beard, was a Romantic by temperament and had been confirmed in it by long sojourns in Germany. He was an intimate in our household, and had given me as a small boy Kingsley's *Water Babies*, a book full of the strangest natural history, and containing what I thought was a wonderful sentence spoken by Mother Carey (*natura naturans*) in her Peacpool: "I am

not going to trouble myself to make things. I sit here and make them make themselves." That seemed to me to explain Darwinism. I tried hard to please Gilson now, and he was a patient and enthusiastic teacher. I can never read the wonderful quatrain of the Harper's song in *Wilhelm Meister*, beginning

Wer nie sein Brot mit Tränen ass,

—lines that reveal the very essence of Gilson's own personality—without remembering how he asked us once to bring an English translation of that quatrain to the next recitation. I toiled all the evening over a metrical translation, quite unaware that thousands of men had attempted that task without much success. As we were going into the classroom the next day, I was accosted by "Fatty" Smith, the best poker-player in our class, but notably weak in German. "Bliss," he said, "lend me your translation. Gilson called you up yesterday, and he won't call you today; but he is sure to call me!" It seemed priggish to refuse, for "Fatty" was in a tight place; and I parted with my carefully wrought jewel. Smith was the first man called, and obediently wrote that translation upon the blackboard. Gilson read it, looked quizzically at "Fatty" Smith, and then his eye roamed over the class and rested upon me. "Perry," he said blandly, "will you write *your* translation upon the blackboard?" I had to think fast, but by dint of using phrases which I had rejected the night before, I managed to produce a second version. Gilson shook his head as if in deep depression. "Bliss," he remarked sadly, addressing me by my first name, "your poetical style reminds me of Ossian." I suppose none of us knew who Ossian was, but I found Macpherson's poems in the college library that afternoon, and decided that Professor Gilson had not intended to compliment me. Charming, lonely, sorrow-stricken Gilson, with his inner life so completely hidden from that group of happy-go-lucky boys!

*Wer nie sein Brot mit Tränen ass,
Wer nie die kummervollen Nächte
Auf seinem Bette weinend sass,
Der kennt euch nicht, ihr himmlischen Mächte!*

Under the system of required courses then in vogue, we all studied three subjects under my father: the Constitution of the United States, English history, and political economy. His public reputation, then at its height, had been won in the latter field, but it often happens that a teacher with wide-ranging intellectual interests is known to the academic public mainly by one of his courses, while his best teaching may actually be done in courses that do not catch the public eye. I think that my father's lectures on the Constitution were admirable, although we were not mature enough to grasp all of their

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implications. We could not appreciate, for instance, the significance of many of those Supreme Court decisions which he analyzed with such zest. As Grandfather Smedley once said of John Bascom's sermons in a little church in Pownal, "He put the fodder too high for the calves." On the other hand, his course in the history of England has been criticized as being too elementary—"practically a memoriter exercise." I cannot agree with this verdict. It is true that we were required to familiarize ourselves, for each recitation, with a few pages of J. R. Green's *Short History of the English People*, then a new and—to me at least—a fascinating book. But this was only the beginning: we had to rise and state the substance of each of Green's paragraphs in our own words, and then discuss the facts and judgments involved, amid constant questioning and illustrations offered by the Professor and the class. To me it was an immensely stimulating course, and in view of my subsequent studies, quite the most valuable one which I had at Williams, although there were some moments in Mark Hopkins's recitation room which made a deeper impression upon me at the time.

In the famous course on political economy I was self-conscious, and often alarmed lest Father, in the intensity of his convictions, should become too excited. He had just turned fifty in our junior year, and seemed in robust health and splendid vitality; but he had toiled and thought and felt too passionately, and ten years later he was a broken man. On many aspects of his subject he was content with clear and dispassionate exposition. Production and exchange, labor and capital, land and currency and credit, he could discuss with scientific precision and poise. But when he came to foreign trade and American tariffs, he smelled the battle like a war-horse. His very bones cried out against "Protection, falsely so called." I had heard all this at home since I had heard anything, and I had no doubt that Father, like his friends W. G. Sumner and David A. Wells, was on the right side of the tariff reform argument. I think so still. But I hated to have my classmates egg him on, by their questions, to more and more dogmatic and extravagant utterance. There was no help for it. His absolute frankness, his devotion to truth as he saw it, his ethical conviction that tariffs drawn in favor of privileged groups were simply a question of Right and Wrong, made him a formidable advocate, and his wit and humor were weapons that often made the class howl with delight, even though these weapons were turned against their own arguments. "Peri's" classroom was alive—everyone admitted that; but I wondered whether it were not too controversial, too much of a spectacle. A generation later, at Harvard, one might have seen much the same intermittent intolerance in a very different man, Irving Babbitt. Babbitt had naturally a finely critical intelligence, but when he touched Rousseau and Romanticism he threw dispassionate criticism

to the winds and became a stark, uncompromising dogmatist, a Peter the Hermit, leading a Crusade. A delightful passage in Logan Pearsall Smith's *More Trivia* may serve to illustrate the point:

"I expressed my conviction briefly; but the time-honored word I made use of seemed unfamiliar to [these youngsters];—they looked at each other and began whispering together. Then one of them asked in a hushed voice, 'It's *what*, did you say?'

"I repeated my monosyllable loudly. Again they whispered together, and again their spokesman came forward.

" 'Do you mind telling us how you spell it?'

" 'I spell it, I spell it with a *W*!' I shouted. 'W-R-O-N-G—*Wrong*!'

Arthur Latham Perry and Irving Babbitt had scarcely a trait in common except this: they respected the unfashionable word "Wrong" and were not afraid to shout it.

In view of my undergraduate interest in speaking, writing, and miscellaneous reading, it is curious that I can recall so little about our class work in English. I remember that we studied D. J. Hill's *Rhetoric* and were informed that the distinction between "synecdoche" and "metonymy" was important. We had a *Manual of English Literature*, and must, I suppose, have recited from it. My brother Carroll, whose class also used a *Manual*, avers that he learned just one thing about English literature in college, namely, that "The lyrics of Edmund Waller can never die." I did not carry away from the classroom even as much as that.

We were obliged to write and deliver "orations" once or twice a year under the supervision of the Professor of Rhetoric, Llewellyn Pratt. He was a courteous, cultivated gentleman, and a master of public speech; and no doubt he gave our productions as much attention as they deserved. It was very little. We had also, during part of each year, the services of a friendly and enthusiastic Professor of Oratory, George L. Raymond, author of many volumes of verse and a series of books on Esthetics. We used his *Orator's Manual*, containing an ingenious and elaborate system of voice-production, stress, gesticulation, posture, etc. We called him "Bulldozer," because he was nervous in the classroom and easily overawed; his nickname when he taught at Princeton was "Mary"—for the same reason. But no one could be kinder to me, or more encouraging. Up to my senior year, the "gloomy shine" of my oratorical efforts had not impressed the judges of our contests, but now, under "Bulldozer's" direction, I toiled away, in the big empty Museum room of Jackson Hall, at his "vocal exercises," and learned the trick of deep-breathing and the proper "placing" of the voice. Even the moth-eaten stuffed moose behind the glass

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cases must have thought the performances of this young Demosthenes absurd, and I let no one, except Raymond, know what I was doing. But I was bent, grimly and ferociously, upon mastering every secret of *The Orator's Manual*, in order to win the Graves Prize speaking contest at Commencement. And there was really more than that at stake, though I did not then suspect it.

Whatever the defects of the curriculum were in our day, we had the inestimable advantage of plenty of time to ourselves. In our senior year, for example, we recited in ethics or philosophy, at nine in the morning and five in the afternoon. Dr. Chadbourne and Dr. Hopkins were supposed to divide these courses, but Dr. Chadbourne spent the fall term stumping the country for Garfield, and as he was retiring from office at the end of the year (and was also trying to run two cotton mills!) he left most of the senior instruction to Dr. Hopkins. We had textbook assignments, but a half-hour of preparation was all that most of us gave. The theory was that seniors should have ample time for reading, writing and general reflection upon man's place in the universe! This suited me exactly and the winter nights in Williamstown were long.

I had been elected an editor of the college paper, *The Athenaeum*, in my sophomore year, and was greatly flattered until I discovered that the youngest editor was expected to read all the proof and write whatever verses were needed for "fillers." I kept at it, however, and learned to write my share of those smart and caustic editorials which long have been the curse of Williams journalism. I wrote about new books, hailing Swinburne's latest volume, for instance, with all the rapture with which undergraduates of today have welcomed D. H. Lawrence and Ernest Hemingway. Robert Louis Stevenson was just beginning to print short stories. Any day might bring a new book by Browning or Tennyson, Darwin or Huxley, Hardy or Arnold. Emerson and Carlyle were living, though they had ceased to write. But Whitman, Whittier, Holmes, Longfellow, and Lowell were still productive. Melville was alive, though we did not know it, and Mark Twain was very much alive indeed. And so were Victor Hugo and Ibsen, Turgenev and Tolstoi and Karl Marx.

"Here is God's plenty," and enough to turn any boy's head. No one was aware of the deep and subtle change about to take place in the spirit of English literature. We had already had the best that the Victorians could offer, and after 1880 there was to be less of that "quality of nobleness" which had been the distinctive trait of English writing since 1830. But we boys in a rural New England college knew nothing about literary tendencies or literary labels: it never occurred to us that we were "Victorians" or "Puritans" or even New Englanders. There were the books if we wanted to read them, and whether the authors were American or English, Romantics or Realists, mattered little to us.

I read without any plan or purpose except to gratify an appetite for books. Unluckily, none of us, I think, read in college any Latin and Greek except what was required. That was the tragedy of the system: we broke with the classics just when they might have served us most. I read no French as an undergraduate and only a little more German than was demanded. I was still reading Emerson, and began now to dip into some of the authors whom he praised, like Montaigne and Rabelais and old Burton of the *Anatomy of Melancholy*. I had read Milton and Wordsworth and Whittier since childhood, and can no more recall my first reading of *The Scarlet Letter* than my first reading of *Hamlet*. But now I began to make some discoveries: Keats and Byron (though neither Shelley nor Coleridge as yet), Carlyle (to whom I was introduced by a "village atheist," a Welsh cobbler who trained his dog to bark whenever the Methodist Church bell rang!) and Browning and Walt Whitman. What happiness in picking such "finds" as these from the upper shelves of the college library, and carrying them off to 32 West College! I was warned that Mark Hopkins had declared that *he* could not understand Browning, but secretly I believed that the old gentleman had not made much of an effort. I was sure that there was "gold in them hills," and I mined them for a score of years. There was no one to share my enthusiasm for Browning and Whitman, but Fred Bard and I used to wander over the hills spouting Swinburne and *The Earthly Paradise* and *Sigurd the Volsung* to each other, and when Fred reported that his barber in New York (or it may have been a bar-keeper) could declaim more pages of *Sigurd the Volsung* than either of us, our cup of delight was full.

Yet I think that for the majority of our class the chief intellectual adventure of the senior year was the morning or evening hour with Mark Hopkins. He was then seventy-eight, but his powerful frame and noble features showed little or no trace of the burden of years, and there was never, up to the time of his death at eighty-five, any apparent diminution of his mental vigor. This exceptional endowment played its part in the spell which he cast upon his contemporaries. No one can furnish an adequate definition of greatness, but Mark Hopkins, like Gladstone and Bismarck, gave the beholder the instant impression of being in the presence of a great man. He had already become in his lifetime a legend, a symbol of teaching power: "Mark Hopkins on one end of a log, and a student on the other."

Four of his pupils and colleagues, Professors Bascom, A. L. Perry, Carter, and Spring, have made painstaking analyses of the Doctor's personality and methods. They all agree that he was not, in the strict academic sense, a "scholar"; the source of his power was not in his knowledge of books. But that is an old story in the history of the world: "He taught them as one having

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authority, and not as the scribes." Any teacher can study books, but books do not necessarily bring wisdom, nor that human insight essential to consummate teaching skill. I think that the peculiar gift of Mark Hopkins has rarely been better described than by a single phrase from my old friend Professor Dodd. I was driving with him over Mason's Hill, a year or two after my graduation, and I was telling him about attending the brilliant lectures on the history of philosophy which Stanley Hall was then giving to Williams seniors.

"After all," I said—captivated by the new horizons which Stanley Hall was opening for us—"Dr. Hopkins taught us nothing about the history of philosophy." "No," said Dodd slowly, "he taught you nothing *about* philosophy, but he taught you *to philosophize*." This is essentially what my father wrote, in pointing out that the Doctor's favorite question—"What do *you* think about it?"—was the key to his success as a teacher. After beginning by asking the pupil what the textbook stated upon this and that topic, the Doctor would almost invariably inquire: "*What do you think about it?*" "It stole the hearts of crude young men to hear such a man as he was plumping down upon them from his desk, as if it were a matter of much importance, such a question as that! It suddenly increased their own self-respect."

To discover that you had a mind—narrow, commonplace, or ill-trained, perhaps, but a mind of your own, was a thrilling experience. You rose when your name was called, and sometimes the Doctor's initial questions, like those of Socrates, seemed remote from the matter in hand. The fascination lay partly in the effort to guess what the Doctor was driving at. He knew, and we did not, but the game gradually revealed itself as one bland question succeeded another. He always had an objective and sometimes the class perceived it more quickly than the boy who was on his feet, trying to keep his wits and to avoid foolish answers. But often the objective was remote: we were like a party of mountain-climbers, conscious that we were well above the timberline, but ignorant of the particular peak for which the guide was headed. We were having a good climb and were made to feel that we could keep up the pace and get some grand views, even though the Doctor did not seem to care whether we reached any particular hut by nightfall. To some men in each class, no doubt, he seemed a philosopher without a system, a moralist indifferent to definitions. He was in truth a builder of character who could lay a stone wall without ever looking at a blue-print.

All of use recognized his immense latent power. "Half his strength he put not forth." Yet this apparently indolent wrestler with ideas—never dogmatic, never over-earnest, never seeming to desire converts to any creed or platform—was ceaselessly active in studying the members of each class and in directing, however subtly, the questions by which he sought to develop

and test their individual capacity. "Also he knew men at once," it was said of Cosimo de' Medici, "when he looked into their eyes."

I must limit myself to a single illustration of this wise handling of one of his "crude young men." In our senior year the mutterings of the famous Andover controversy in theology began to be heard throughout New England. Was "everlasting" punishment the same thing as "eternal" punishment? What was really at issue was not the exact meaning of some Greek words, but the whole Calvinistic conception of the actuality of a fire and brimstone hell. I had been brought up in a very liberal and deeply religious household, and I knew that on this question of a material hell my father and his friend John Bascom thought very differently from Grandfather Smedley. Being now twenty and fond of debating, I was wholly on the side of the "new theology," as it was then called. Nobody knew where Dr. Hopkins really stood, although he was supposed to be a pillar of Orthodoxy. He was an old man and a wise one, and refused to be drawn into controversy.

One Saturday morning, in reviewing some passage from a textbook, he called me up and put this question: "Perry, do you think that the fear of future punishment is a proper motive for human action?" I fear the light of battle gleamed in my eyes, for I saw the whole of the New Theology at stake in the Doctor's apparently abstract and innocent inquiry. And the textbook had said "Yes"; which was only an additional reason why a self-confident youth should take the other side. So I straightened my shoulders and answered "No, sir."

The Doctor looked me over. "I will repeat the question," he said slowly. "Do you think that the fear of future punishment is a proper motive for human action?"

"No, sir, I do not." I was ready to debate against a whole Bench of Bishops; *Athanasius contra mundum*; Luther at the Diet of Worms, etc., etc.

To my disappointment, the Doctor straightway called up "Turk" Parsons, a missionary's son, who recited the textbook position with fluent precision. But by that time the Doctor seemed to have lost all interest in the question, and went on to something else. The fight was evidently off, and I sulked for the rest of the hour. When the class was dismissed, I had to pass directly in front of the Doctor's desk. He leaned over toward me, bowing his magnificent shoulders and superb head. It was as if an old lion had turned in his cage to look at you, only that all the bars were magically down.

"Bliss," he said gravely, "did I understand you to say that you thought the fear of future punishment was not a proper motive for human action?"

I was still obstinate, "Yes, sir, that is what I think."

The leonine features relaxed into a captivating smile. "Well, now, Bliss,"

he remarked confidentially, as if to a very intimate friend: "*a great many young men have felt about that question exactly as you do.*"

All the anger and conceit went out of me. I saw myself, not as a lonely rebel, but as one of the great company of the immature. With one sentence Mark Hopkins had put me in my place, and had nevertheless managed to let me feel that he liked me. I hope I had manners enough to thank him, for no teacher had ever rendered me a greater service.

The class of 1881 was the last to be graduated under President Chadbourne. We represented, although we were not aware of it, the end of an era. President Carter's administration was to bring in new professors, new methods of instruction, new buildings and endowments, and a large increase in the number of undergraduates. The rural isolation of Williamstown began to be less marked, though it was still to be a score of years before telephones and motor cars began to herald vaster changes still. I do not pretend to hold a brief for the old order of things, either at Williams or at the other Eastern colleges of our time, but before the old order is quite forgotten, it is fair to say that with all of its obvious defects, it bred some very good men. William Howard Taft (Yale, 1878), Woodrow Wilson (Princeton, 1879), and Theodore Roosevelt (Harvard, 1880) all belonged to our undergraduate generation. Their children, and now their grandchildren, have enjoyed far richer academic opportunities than those three men. Whether the second and third generations have worked as hard or felt as keen a prompting of ambition for leadership is perhaps an idle question; but the educational conditions that obtained in the late eighteen-seventies were not quite so unfruitful as they might easily be made to appear.

At Williams, at least, it must be admitted that during the eighteen-seventies there were more teachers of national reputation, in proportion to the total number of the faculty, than there have been in any subsequent period. The multiplication of courses and instructors, made necessary by the sudden increase of students, has resulted, as probably in all American colleges, in a lowering of the proportion of teachers of exceptional ability. There is less extreme poverty, and no physical hardship whatever, for Williams undergraduates today; but whether luxurious surroundings are really any stimulus to scholarship—even in the "houses" of Harvard and the "colleges" of Yale—remains to be proved.

Our social life, like our esthetic life, was undeniably barren. We had practically no contact with our professors outside of the classroom, and it did not occur to us that this might be desirable. When one thinks of the tutors and preceptors and advisers and deans of today, it is curious to remember

that we had no one to "hold our hand" in time of trouble, and that—precisely like the university students of France and Germany both then and now—we had not the slightest desire to have our hands held. We wanted to be let alone. We chafed very little over the rigid requirements of attendance: chapel twice a day, and no allowance whatever of classroom "cuts" except for illness. Discipline, swift and simple, was administered by the professors who served as "class officers," for deans had not been invented.

About half the men in our class confessed to taking an occasional drink, although I do not remember seeing a single drunken undergraduate in the four years. Nevertheless, of the ten men who were photographed for the varsity nine in our senior year, four were hopelessly ruined by drink before they reached middle life. My own impression is that at Williams, Princeton, and Harvard—the colleges that I have known best—there has been a fairly steady improvement in undergraduate morals for the past fifty years. (My son says that I know nothing about it!) There is certainly less attention given to formal religious exercises, such as the class and college prayer meetings of half a century ago, and the rôle of religious leadership of the college, once taken by such professors as Albert Hopkins, is now left to chaplains and pastors. It is probably true that the informal and inevitable ethical discussions by undergraduates avoid just now the unfashionable words "right" and "wrong." The boys use other synonyms in their restless search for originality in expression. But to affirm that they are no longer interested in what was once called right and wrong seems to me a complete misunderstanding of the undergraduate mind. "Not interested in right or wrong?" said one of my ablest colleagues once, as we were walking home from a lecture on Goethe's *Faust*; "why, at bottom, young fellows aren't interested in anything else!"

Whatever the gains or losses which the subsequent years have brought to American colleges, our undergraduate days were now over. Trained or untrained, wise or foolish, we had had our chance. Our Commencement was saddened by the assassination of President Garfield, just as he was leaving Washington on the way to his twenty-fifth reunion at Williamstown. He was one of the most popular of the alumni, and his election to the Presidency had been one of the excitements of our senior year. Only a few hours after the tragic news reached us (Saturday, July 2) came the first of the Commencement festivities: the Graves Prize contest in the public delivery of the six best essays written by seniors. No one pays much attention to such contests now, but in our day crowds attended them. I remember how "Bulldozer" Raymond rushed up to us six boys—who were quite excited enough already—to tell us that all subsequent Commencement exercises would probably be canceled, as

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Garfield's death was momentarily expected; and that we must do our best before the great audience that had gathered. My speech was on Russian Nihilism, and I had toiled as hard over it as the Boy Orator of the Platte did upon his "cross of gold" masterpiece. And I doubt if even Bryan ever declaimed with fiercer conviction that he was right! For once my "gloomy shine" seemed to dazzle the eyes of the judges, and I had my reward for all the lonely months of practice in the cold and empty Jackson Hall.

On Sunday President Chadbourne preached his last Baccalaureate. The news from Washington seemed more encouraging. On Monday we beat Amherst in baseball. In the evening we listened to Senator J. J. Ingalls's oration before the Adelpic Union of the literary societies. I had to preside, but recall the orator's eloquence less vividly than my own struggle to decide whether I ought to wear my new (and first) swallow-tail or blue suit. Luckily I put on the latter, for the famous Senator from Kansas strolled down to the church ten minutes late, smoking a long cigar, and clad in a checked suit of a very loud pattern. He explained that the trunk containing his evening clothes had been lost in New York. Privately I believed that that trunk was, as the Senator once said of purity in politics, "an iridescent dream." On Tuesday I read a long and solemn Class Poem inspired by George Eliot; Mr. T. B. Aldrich showed me a great kindness in rejecting it for the *Atlantic Monthly*. In the blazing noonday of Wednesday, clad now like most of my classmates in a swallow-tail, I delivered a graduating oration on "The People's Poet"; probably a plea for more men like Burns. But I remember nothing whatever about it except Professor Pratt's candid remark upon the manuscript: "Page after page, Bliss, you seem just on the point of saying something, but you never quite reach that point!" However, I forgave this undoubtedly just criticism, for I collected the Van Vechten Prize for extemporaneous speaking, and had more money in my pocket than I had ever had in my life.

Of course, in those final days I was trying to do too many things. Even now, and many times each year, I have a recurrent dream that I am about to be summoned to the platform to deliver a graduating speech; but alas, it is unwritten, and there are only a few minutes left. Oddly enough, there is always a double consciousness about this dream, for I invariably say to myself, in my distress: "You have been making all kinds of addresses, for half a century. You could easily make a better speech than these youthful classmates of yours, if only there were five minutes in which to collect your thoughts." But there are no five minutes:—that is the agony of this hallucination. There is not even one minute! And then I wake up, roll over, and thank Heaven that I have retired and need never make another speech.

SEA CHANGE¹

Bertha Damon

TWELVE miles from North Stonefield on Long Island Sound was Pine Beach—"the Sea" we always called it. Before the gentle water was spread a wide beach of smooth white sand, backed for two miles by a low bluff, green with wiry grass and darkened with pine trees, beyond which stretched wide salt marshes and fresh meadows, where wild beach-plum bushes straggled, fringed polygala brightened the cart tracks, and pink-and-white marshmallows blew in the sea wind. All through, serpentine creeks crept coiling to the sea; they were full of crabs that rather asked to be caught on bits of pork tied to a string. On the low bluff Grandma built herself a summer cottage, a retreat as she thought, for the place was quite unsettled. Later on it was to be still more unsettled, because her sister-in-law Charity got her to build a double cottage with her—but of that, by and by.

Early in May each year, Grandma and her family, and our few simple needments in some inherited carpetbags, made exodus from North Stonefield in a carryall, with Juno the cow hitched protesting to the rear, bound for "the Sea." In the Bible it said men went "down to the sea in ships," but we could never make out how to do that. Caleb Whipple's horse, who always dragged us, was annually elected to this job because he was considered by Grandma as "so safe," a virtue not commonly to be found in horses, and menfolks. During our safe slow progress I used to try to pass the time by wondering whether if Grandma with her superior purposefulness should be made to change places with the lackadaisical horse, she could not drag both him and us faster; or if the wilful and sinewy Juno, her energies worse than wasted pulling backwards in the rear of the carryall, given opportunity, would not sweep us onward, rushing as the chariot of the Lord. But sooner or later—no, always later, we got to "the Sea" and Caleb's horse crawled back to North Stonefield with him. Having been hired by the day—it took just a day to complete the round trip of twenty-four miles—the horse and Caleb had nothing to regret.

"The Sea" was in Grandma's eyes a perfect place for summer life, for there Thoreau's "simplify, simplify" could be reduced to the lowest common denominator. Something like camping, not housekeeping, was the ideal, and clothes were minimum. The cottage itself Thoreau would have approved. It was merely a shelter, one board thick. As Caleb was wont to say in admiration of its airiness, "You could spit through it anywhere." And the

¹Reprinted from *Grandma Called It Carnal* by Bertha Damon. Simon and Schuster publishers, 1938.

boards were warped in the singularly clear sunlight and drenched with big rains that blew up from the south sometimes, across the billows. There were five cozy rooms; there was a porch in back looking at the little seashore garden, the beds full of brighter colored flowers than those at home, edged with stones and shells. A porch in front, draped with white honeysuckle, looked pleasantly at the Sea.

In Grandma's house in North Stonefield the furnishings were chiefly inherited from the past; few, antique, simple; Grandma did not allow them to be changed. But in the sea cottage she permitted Martha to follow what was then the fashion in such lighthearted places; to go modern, as it were. The cottage sitting room was consistently marine. Nothing we found on the beach but must suffer (suffer is the word) a sea change into something rich and strange for household adornment. The sitting-room walls, like those of all the other rooms in the cottage, were of plain vertical boards. There plainness ended. At frequent intervals they were hung with "pictures" created from pressed sea moss of various colors mounted on white paper and framed in seashell frames, made by pressing into putty in patterns "gold," "silver," and "pearl" shells and those of razor clams and snails. Tufts of dried sea moss dangled tastefully about, and on all horizontal surfaces, whether of stringers, shelves, or furniture tops, sea-polished stones were arranged.

In the middle of the room stood the world's most ingenious "parlor table." It had been covered all over with putty in which were inlaid shells of every sort, in rosettes, scrolls, and borders. Aunt Martha herself had made it: it was her masterpiece. Some estheticians hold that the perfectly utile is always beautiful. This table was not even imperfectly utile; draw your own conclusions as to its esthetic value. It could not be written upon; it must not have books or magazines laid on it; it was only to be looked at. You could look at it as long as you wanted to. The "mantelpiece" over nothing in particular—the fireplace was in the next room—was draped with a "lambrequin" made of pinked black felt tabs, on each of which was appliquéd a recognizable though not realistic starfish, horseshoe crab, anchor or such like. The hooked rugs, too, had gone marine under Aunt Martha's hand in patterns of gray-sailed ships (Great-Uncle Aaron's trousers) on navy-blue seas (Mrs. Tuttle's husband's jumpers), but the braided and crocheted rugs had to be content to coil round and round in circles. Over against the west wall, under the windows, was the home-built couch covered with a bright velvet and satin "crazy quilt."

"If expense was no object," said our neighbor Mrs. Sparkes, "you could of had window drapes of fish net hanging from crossed oars."

But expense was decidedly an object, so the windows fell short of that

suggested glory. In one corner was the exquisite little melodeon Aunt Charity and Uncle Matthew had taken to China to show the heathen, shown, and brought back again. Its shining rosewood top was hidden by a white cotton scarf embroidered with tufts of milkweed "silk." Tall bunches of dried salt-marsh grasses and cattails, stuck in large bottles and vases on the floor in unlikely places, served further to remind us, sometimes unexpectedly, that we were indeed living marinishly.

In those days we had not heard that being sanitary has anything to do with interior decoration; we did not dream of avoiding moldings, details, and what have you, so that a room must look as it does to the patient in a hospital, "easy to clean up just as soon as you die." Nor had we cause to crave in our domestic setting the peace that comes from blankness; we had enough peace elsewhere. Outdoors for days on end the biggest event was low tide. We did not take the newspaper. As soon as the waves had well receded, we ran out to read the scraps of news the sea had left along the beach. There were always pools of glittering water with little fish or crabs temporarily landlocked, wet shells for the delight of the discovering eye or the adornment of the cottage, and tufts of beautiful colored sea moss; and, for the more practical there were tufts of homely gelatinous sea moss to be collected and dried for future blanc mange, rocks, robbed of their protecting waters, from which clustering blue-black mussels and gray oysters could be gathered, and muddy flats which, struck with a hoe, emitted geysers from the latent clams waiting to be dug and cooked. Indoors, often about the only excitement to be had was from looking at our household goods and gear. And anyhow, though it may seem as if we should have been distracted, we got so used to our magpie scheme of decoration that generally we were scarcely aware of what was going on in our rooms.

All over our sea house the scrubbed pine floors, with islands of rugs, were always a little gritty with sand. The victuals fell just short of grittiness. And someone had said that meals in the Griswold cottage were like the tides—"two every twenty-four hours and an hour later each day." But they were glamorous. At "the Sea" in the field of victuals as in others one could with fewer means achieve greater ends than ever. There Grandma abrogated her law of strictly vegetarian diet, and though we were never allowed fish elsewhere, there we became delightfully piscivorous. Perhaps the edible creatures which came as it were direct to us from God, no sinful middleman intervening, seemed to her purer. And certainly they were cheaper.

Driftwood burned in the fireplace; over the green and rosy flames lobsters, or clams, or mussels boiled in an iron pot of sea water; oysters we roasted in their shells on a grate over the embers. Many an excellent feast we made on

the great horseshoe crabs, those queer survivals of a prehistoric age, whose shells, edged with satin, we hung up for wall pockets, which became traps for old letters and all kinds of flotsam. There were strange poetic desserts: beach plums cooked with sugar, purple in deep cerise-colored juice, and sea-moss blanc mange of an unearthly color and texture.

Grandma herself had a great love for her daily dip. Grandma did not swim, of course; no lady did, or could, I believe, in the costume Modesty dictated. Not "go swimming" but "go in bathing" was the specific term. And as Grandma's approach to the Sea was therefore that of a lady about to take a bath and in public, she was naturally abashed. But how else could she have a real salt-water bath? The Sea could be had only outdoors. In the interests of morality Grandma went in as early in the morning as possible, when fewer people were about, even though that was less comfortable than later when the water and air had warmed up.

Grandma managed to outgarb even the garb of other lady bathers. What Grandma wore under that which met the eye I can only guess, and my guess is a full quota of underclothes. Most good women wore corsets when they suffered the Sea's embrace, but Grandma did not believe in corsets in or out of water. What Grandma had on outside—and what a lot of outside there did seem to be—were long full trousers of a somber gray flannel, gathered at the ankle and falling in a large ruffle, like that on the foot of a cocker spaniel, to conceal any possible seductions of the instep. Over these a long tunic, gathered obscuringly above the bosom in a yoke and at the waist into a belt, fell in voluminous folds half-way below the knee. That this was a sports model was indicated by four rows of white tape stitched on whatever horizontal or vertical edges were available. Accessories are important. On Grandma's head she wore a large shade hat, tied under the chin by a scarf that came down from across the top and bent the brim so that the effect was that of a double-ender coal scuttle. Long stockings and rubbers tied on with tape finished the costume.

Still feeling too naked, Grandma wore from house porch to first sea ripple a vast black mantle, concealing all these concealments. Grandma's idea was always to "keep the body under," and in her bathing costume to keep it under deeper than usual. When she went into the Sea dry, not even a satyr shipwrecked on a desert island would have looked twice, and when she came out of the Sea wet—well, he would have turned away. It was Grandma's firm purpose to conceal physical charms so as not to arouse voluptuous suggestion. In this she was completely successful.

Yet Grandma did not look funny. She came out from the cottage porch in such a dignified way, and walked down across the beach as gravely as if

she were going to church. At the edge of the first wave she laid aside her mantle. Gradually she waded into the sparkling water till up to the waist. Then slowly she bent her knees and immersed herself to the armpits. She rose; again she immersed, this time to the neck, almost as seriously as if it were a baptism. She repeated this process with satisfaction a few times and then came out, still calm, still self-composed, resumed her vast mantle and returned to her cottage with gentle unbroken dignity. No one would have dreamed of laughing.

At the Sea, even Aunt Martha came near having a good time. There were croquet tournaments, in which Aunt Martha, in a shirtwaist and a sailor hat, was specially good in knocking her opponent's ball off the mowed piece, conclusively. She and all of us, in order to have good times, had to dodge Great-Aunt Charity pretty constantly. She had just come back from being a missionary to the "heathen" in China, and, I suppose, just to keep her hand in, kept using on us the technique she had perfected among them. How I wished I could talk with just one heathen and learn from him, firsthand, exactly what impression Great-Aunt Charity had made on him and his, and see if it at all resembled that made on me, a Christian child. I wondered if being without the Gospel would make Great-Aunt Charity easier to take. She used to go about organizing prayer meetings to be held in her cottage at the very best times of day for doing more worldly things. She made you feel you had to go or seem to neglect God socially. Aunt Charity was quite a force at the Sea. She had one of those frequent, but not spontaneous smiles that did for her face what artificial flowers do for some rooms. Smiles, somehow, were more *used* in those days; they were instruments, weapons, what not. Aunt Charity's smile always met its match, however, when it came up against Aunt Martha's.

Every evening we read aloud to Grandma and heard the Sea accompanying. We went early to bed; the bedticks were filled with salt-marsh hay that had the disconcerting habit of emitting inexplicable squeaks, but we slept peacefully, and all night breathed sea and honeysuckle mingled.

And so our delightful life in salty Eden went on. When first, aged five, I saw the Sea, I said "Grandma's pond," and it was just that for two or three years. Then a sister or so of Grandma's and several neighbors built themselves cottages and we were a community.

And then, and then—how it came about I was never able to fathom. Grandma and her sister-in-law, Great-Aunt Charity, were involved in building a double cottage together. Whether the structure went up to the sound of hymns or not, as soon as it was finished, at least, trouble began.

For one thing, Charity was always twitting Grandma that Grandma's half

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of the cottage was six inches over on Charity's land. My young mind was so full of its own preoccupations that it had little room for details of the bitter game my elders and betters chose to spend their time playing. But one incident, dramatic, shocking, remains. For a long time Grandma was not convinced of this geoarchitectural error on her part. That period was bad enough. Then came a period when she was, and that to Grandma was unbearable. Finally rationalizing did its perfect work. Grandma said Charity had complained; she said Charity was in the right of it; she said justice should be done. Whenever Grandma said justice, something was likely to happen.

When autumn came and Charity went, and Grandma was once more alone by her Sea, she hired an innocent carpenter from another village. She got him to saw her half of the cottage from Charity's half, clean from ridge to mudsill. She then had this half of hers set exactly six and one-half inches to the east, on her own indisputable land. For some reason perfectly good in Grandma's mind, she took along with her own half of the cottage the middle partition, leaving Charity's half-cottage open to all outdoors. I was always fascinated by the thought that if only I had been there I could for once have played dollhouse perfectly, moving Aunt Charity's sacred furniture about, even in the two upstairs bedrooms, if I could have stood outside with my head in the pinetops like Gulliver in Lilliput . . . or maybe, lacking a miracle, I might have had a ladder.

Now Grandma was proud and sure that justice had been done—or she let on she was: Charity had not liked Grandma's part of the cottage to be over on her side of the property line, and Grandma had fixed it so that it was not there any more. But Grandma didn't tell anyone yet.

When in the spring Aunt Charity came back to her seashore property, sure enough, she found out by herself that it was unencumbered. There was a great deal of talk all around, between Aunt Charity and her friends, between Grandma and her friends, and, most of all, between Grandma and Aunt Charity. Grandma, of course, being more in the wrong than Charity, had to talk louder and faster at the time and a great many years longer, always justifying herself for sawing the cottage in two and most of all for that delicate little detail of carrying off the partition. I believe her claim was that Charity's having required her to move her part of the cottage over onto her own land entailed the expense of a carpenter and some rollers and a horse, which the value of the partition didn't begin to offset—something like that. Grandma could be relied upon to have a good strong reason that seemed watertight, but somehow wasn't.

Almost all her life Grandma justified herself in stout dialectic. But in her latter years she gave signs of beginning to think that while her act was no

longer a modern instance, it had never even been a wise saw. One day when Charity had long since gone to her reward, whatever it was, and Grandma was timidly drawing nearer to hers, she said to me, "Bertha, this may be heresy and I don't want to shake your faith—"

"Don't worry, Grandma."

"But I have almost, almost come to believe that God will in the last judgment have mercy on the heathen."

"Why, Grandma, Grandma!" I said, not surprised about God but about Grandma.

"Yes," Grandma affirmed, "those who believe in God are saved not by Works but by Grace. Yet God is a just God. Now it has come to seem clear to me that if His justice stands, His Grace will surely have to extend to take in the heathen who are in darkness if he takes in Charity and me, for we"—"we," said Grandma though Charity had never sawed a board, "we did what we did in the full light of Gospel."

THE FEEL¹

Paul Gallico

A CHILD wandering through a department store with its mother is admonished over and over again not to touch things. Mother is convinced that the child only does it to annoy or because it is a child, and usually hasn't the vaguest inkling of the fact that Junior is "touching" because he is a little blotter soaking up information and knowledge, and "feel" is an important adjunct to seeing. Adults are exactly the same, in a measure, as you may ascertain when some new gadget or article is produced for inspection. The average person says: "Here, let me see that," and holds out his hand. He doesn't mean "see," because he is already seeing it. What he means is that he wants to get it into his hands and feel it so as to become better acquainted.

I do not insist that a curiosity and capacity for feeling sports is necessary to be a successful writer, but it is fairly obvious that a man who has been tapped on the chin with five fingers wrapped up in a leather boxing glove and propelled by the arm of an expert knows more about that particular sensation than one who has not, always provided he has the gift of expressing

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himself. I once inquired of a heavyweight prizefighter by the name of King Levinsky, in a radio interview, what it felt like to be hit on the chin by Joe Louis, the King having just acquired that experience with rather disastrous results. Levinsky considered the matter for a moment and then reported: "It don't feel like nuttin'," but added that for a long while afterwards he felt as though he were "in a transom."

I was always a child who touched things and I have always had a tremendous curiosity with regard to sensation. If I knew what playing a game felt like, particularly against or in the company of experts, I was better equipped to write about the playing of it and the problems of the men and women who took part in it. And so, at one time or another, I have tried them all, football, baseball, boxing, riding, shooting, swimming, squash, handball, fencing, driving, flying, both land and sea planes, rowing, canoeing, skiing, riding a bicycle, ice-skating, roller-skating, tennis, golf, archery, basketball, running, both the hundred-yard dash and the mile, the high jump and shot-put, badminton, angling, deep-sea, stream-, and surf-casting, billiards and bowling, motorboating and wrestling, besides riding as a passenger with the fastest men on land and water and in the air, to see what it felt like. Most of them I dabbled in as a youngster going through school and college, and others, like piloting a plane, squash, fencing, and skiing, I took up after I was old enough to know better, purely to get the feeling of what they were like.

None of these things can I do well, but I never cared about becoming an expert, and besides, there wasn't time. But there is only one way to find out accurately human sensations in a ship two or three thousand feet up when the motor quits, and that is actually to experience that gone feeling at the pit of the stomach and the sharp tingling of the skin from head to foot, followed by a sudden amazing sharpness of vision, clear-sightedness, and coolness that you never knew you possessed as you find the question of life or death completely in your own hands. It is not the "you" that you know, but somebody else, a stranger, who noses the ship down, circles, fastens upon the one best spot to sit down, pushes or pulls buttons to try to get her started again, and finally drops her in, safe and sound. And it is only by such experience that you learn likewise of the sudden weakness that hits you right at the back of the knees after you have climbed out and started to walk around her and that comes close to knocking you flat as for the first time since the engine quit its soothing drone you think of destruction and sudden death.

Often my courage has failed me and I have funk'd completely, such as the time I went up to the top of the thirty-foot Olympic diving-tower at Jones Beach, Long Island, during the competitions, to see what it was like to dive from that height, and wound up crawling away from the edge on hands and

knees, dizzy, scared, and a little sick, but with a wholesome respect for the boys and girls who hurled themselves through the air and down through the tough skin of the water from that awful height. At other times sheer ignorance of what I was getting into has led me into tight spots such as the time I came down the Olympic ski run from the top of the Kreuzeck, six thousand feet above Garmisch-Partenkirchen, after having been on skis but once before in snow and for the rest had no more than a dozen lessons on an indoor artificial slide in a New York department store. At one point my legs, untrained, got so tired that I couldn't stem (brake) any more, and I lost control and went full tilt and all out, down a three-foot twisting path cut out of the side of the mountain, with a two-thousand-foot abyss on the left and the mountain itself on the right. That was probably the most scared I have ever been, and I scare fast and often. I remember giving myself up for lost and wondering how long it would take them to retrieve my body and whether I should be still alive. In the meantime the speed of the descent was increasing. Somehow I was keeping my feet and negotiating turns, how I will never know, until suddenly the narrow patch opened out into a wide, steep stretch of slope with a rise at the other end, and *that* part of the journey was over.

By some miracle I got to the bottom of the run uninjured, having made most of the trip down the icy, perpendicular slopes on the flat of my back. It was the thrill and scare of a lifetime, and to date no one has been able to persuade me to try a jump. I know when to stop. After all, I am entitled to rely upon my imagination for something. But when it was all over and I found myself still whole, it was also distinctly worth while to have learned what is required of a ski runner in the breakneck *Abfahrt* or downhill race, or the difficult *slalom*. Five days later, when I climbed laboriously (still on skis) halfway up that Alp and watched the Olympic downhill racers hurtling down the perilous, ice-covered, and nearly perpendicular *Steilhang*, I knew that I was looking at a great group of athletes who, for one thing, did not know the meaning of the word "fear." The slope was studded with small pine trees and rocks, but half of the field gained precious seconds by hitting that slope all out, with complete contempt for disaster rushing up at them at a speed often better than sixty miles an hour. And when an unfortunate Czech skidded off the course at the bottom of the slope and into a pile of rope and got himself snarled up as helpless as a fly in a spider's web, it was a story that I could write from the heart. I had spent ten minutes getting myself untangled after a fall, *without* any rope to add to the difficulties. It seems that I couldn't find where my left leg ended and one more ski than I had originally donned seemed to be involved somehow. Only a person who has been on those fiendish runners knows the sensation.

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It all began back in 1922 when I was a cub sports-writer and consumed with more curiosity than was good for my health. I had seen my first professional prizefights and wondered at the curious behavior of men under the stress of blows, the sudden checking and the beginning of a little fall forward after a hard punch, the glazing of the eyes and the loss of locomotor control, the strange actions of men on the canvas after a knockdown as they struggled to regain their senses and arise on legs that seemed to have turned into rubber. I had never been in any bad fist fights as a youngster, though I had taken a little physical punishment in football, but it was not enough to complete the picture. Could one think under those conditions?

I had been assigned to my first training-camp coverage, Dempsey's at Saratoga Springs, where he was preparing for his famous fight with Luis Firpo. For days I watched him sag a spar boy with what seemed to be no more than a light cuff on the neck, or pat his face with what looked like no more than a caressing stroke of his arm, and the fellow would come all apart at the seams and collapse in a useless heap, grinning vacuously or twitching strangely. My burning curiosity got the better of prudence and a certain reluctance to expose myself to physical pain. I asked Dempsey to permit me to box a round with him. I had never boxed before, but I was in good physical shape, having just completed a four-year stretch as a galley slave in the Columbia eight-oared shell.

When it was over and I escaped through the ropes, shaking, bleeding a little from the mouth, with rosin dust on my pants and a vicious throbbing in my head, I knew all that there was to know about being hit in the prize-ring. It seems that I had gone to an expert for tuition. I knew the sensation of being stalked and pursued by a relentless, truculent professional destroyer whose trade and business it was to injure men. I saw the quick flash of the brown forearm that precedes the stunning shock as a bony, leather-bound fist lands on cheek or mouth. I learned more (partly from photographs of the lesson, viewed afterwards, one of which shows me ducked under a vicious left hook, an act of which I never had the slightest recollection) about instinctive ducking and blocking than I could have in ten years of looking at prizefights, and I learned, too, that as the soldier never hears the bullet that kills him, so does the fighter rarely, if ever, see the punch that tumbles blackness over him like a mantle, with a tearing rip as though the roof of his skull were exploding, and robs him of his senses.

There was just that—a ripping in my head and then sudden blackness, and the next thing I knew, I was sitting on the canvas covering of the ring floor with my legs collapsed under me, grinning idiotically. How often since have I seen that same silly, goofy look on the faces of dropped fighters—and

understood it. I held onto the floor with both hands, because the ring and the audience outside were making a complete clockwise revolution, came to a stop, and then went back again counter-clockwise. When I struggled to my feet, Jack Kearns, Dempsey's manager, was counting over me, but I neither saw nor heard him and was only conscious that I was in a ridiculous position and that the thing to do was to get up and try to fight back. The floor swayed and rocked beneath me like a fishing dory in an off-shore swell, and it was a welcome respite when Dempsey rushed into a clinch, held me up, and whispered into my ear: "Wrestle around a bit, son, until your head clears." And then it was that I learned what those little love-taps to the back of the neck and the short digs to the ribs can mean to the groggy pugilist more than half knocked out. It is a murderous game, and the fighter who can escape after having been felled by a lethal blow has my admiration. And there, too, I learned that there can be no sweeter sound than the bell that calls a halt to hostilities.

From that afternoon on, also, dated my antipathy for the spectator at prizefights who yells: "Come on, you bum, get up and fight! Oh, you big quitter! Yah yellow, yah yellow!" Yellow, eh? It is all a man can do to get up after being stunned by a blow, much less fight back. But they do it. And how a man is able to muster any further interest in a combat after being floored with a blow to the pit of the stomach will always remain to me a miracle of what the human animal is capable of under stress.

Further experiments were less painful, but equally illuminating. A couple of sets of tennis with Vinnie Richards taught me more about what is required of a top-flight tournament tennis-player than I could have got out of a dozen books or years of reporting tennis matches. It is one thing to sit in a press box and write caustically that Brown played uninspired tennis, or Black's court covering was faulty and that his frequent errors cost him the set. It is quite another to stand across the net at the back of a service court and try to get your racket on a service that is so fast that the ear can hardly detect the interval between the sound of the server's bat hitting the ball and the ball striking the court. Tournament tennis is a different game from week-end tennis. For one thing, in average tennis, after the first hard service has gone into the net or out, you breathe a sigh of relief, move up closer and wait for the cripple to come floating over. In big-time tennis second service is practically as hard as the first, with an additional twist on the ball.

It is impossible to judge or know anything about the speed of a fore-hand drive hit by a champion until you have had one fired at you, or, rather, away from you, and you have made an attempt to return it. It is then that you first realize that tennis is played more with the head than with the arms and

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the legs. The fastest player in the world cannot get to a drive to return it if he hasn't thought correctly, guessed its direction, and anticipated it by a fraction of a second.

There was golf with Bob Jones and Gene Sarazen and Tommy Armour, little Cruickshank and Johnny Farrell, and Diegel and other professionals; and experiments at trying to keep up in the water with Johnny Weissmuller, Helene Madison, and Eleanor Holm, attempts to catch football passes thrown by Benny Friedman. Nobody actually plays golf until he has acquired the technical perfection to be able to hit the ball accurately, high, low, hooked or faded and placed. And nobody knows what real golf is like until he has played around with a professional and seen him play, not the ball, but the course, the roll of the land, the hazards, the wind, and the texture of the greens and the fairways. It looks like showmanship when a topflight golfer plucks a handful of grass and lets it flutter in the air, or abandons his drive to march two hundred yards down to the green and look over the situation. It isn't. It's golf. The average player never knows or cares whether he is putting with or across the grain of a green. The professional *always* knows. The same average player standing on the tee is concentrated on getting the ball somewhere on the fairway, two hundred yards out. The professional when preparing to drive is actually to all intents and purposes playing his *second* shot. He means to place his drive so as to open up the green for his approach. But you don't find that out until you have played around with them when they are relaxed and not competing, and listen to them talk and plan attacks on holes.

Major-league baseball is one of the most difficult and precise of all games, but you would never know it unless you went down on the field and got close to it and tried it yourself. For instance, the distance between pitcher and catcher is a matter of twenty paces, but it doesn't seem like enough when you don a catcher's mitt and try to hold a pitcher with the speed of Dizzy Dean or Dazzy Vance. Not even the sponge that catchers wear in the palm of the hand when working with fast-ball pitchers, and the bulky mitt are sufficient to rob the ball of shock and sting that lames your hand unless you know how to ride with the throw and kill some of its speed. The pitcher, standing on his little elevated mound, looms up enormously over you at that short distance, and when he ties himself into a coiled spring preparatory to letting fly, it requires all your self-control not to break and run for safety. And as for the things they can do with a baseball, those major-league pitchers . . . ! One way of finding out is to wander down on the field an hour or so before game-time when there is no pressure on them, pull on the catcher's glove, and try to hold them.

I still remember my complete surprise the first time I tried catching for a real curve-ball pitcher. He was a slim, spidery left-hander of the New York Yankees, many years ago, by the name of Herb Pennock. He called that he was going to throw a fast breaking curve and warned me to expect the ball at least two feet outside the plate. Then he wound up and let it go, and that ball came whistling right down the groove for the center of the plate. A novice, I chose to believe what I saw and not what I heard, and prepared to catch it where it was headed for, a spot which of course it never reached, because just in front of the rubber it swerved sharply to the right and passed nearly a yard from my glove. I never had a chance to catch it. That way, you learn about the mysterious drop, the ball that sails down the alley chest high but which you must be prepared to catch around your ankles because of the sudden dip it takes at the end of its passage as though someone were pulling it down with a string. Also you find out about the queer fade-away, the slow curve, the fast in- and out-shoots that seem to be timed almost as delicately as shrapnel, to burst, or rather break, just when they will do the most harm—namely, at the moment when the batter is swinging.

Facing a big-league pitcher with a bat on your shoulder and trying to hit his delivery is another vital experience in gaining an understanding of the game about which you are trying to write vividly. It is one thing to sit in the stands and scream at a batsman: "Oh, you bum!" for striking out in a pinch, and another to stand twenty yards from that big pitcher and try to make up your mind in a hundredth of a second whether to hit at the offering or not, where to swing and when, not to mention worrying about protecting yourself from the consequences of being struck by the ball that seems to be heading straight for your skull at an appalling rate of speed. Because, if you are a big-league player, you cannot very well afford to be gun-shy and duck away in panic from a ball that swerves in the last moment and breaks perfectly over the plate, while the umpire calls: "Strike!" and the fans jeer. Nor can you afford to take a crack on the temple from the ball. Men have died from that. It calls for undreamed-of niceties of nerve and judgment, but you don't find that out until you have stepped to the plate cold a few times during batting practice or in training quarters, with nothing at stake but the acquisition of experience, and see what a fine case of the jumping jitters you get. Later on, when you are writing your story, your imagination, backed by the experience, will be able to supply a picture of what the batter is going through as he stands at the plate in the closing innings of an important game, with two or three men on base, two out, and his team behind in the scoring, and fifty thousand people screaming at him.

AUTOBIOGRAPHY

The catching and holding of a forward pass for a winning touchdown on a cold, wet day always make a good yarn, but you might get an even better one out of it if you happen to know from experience about the elusive qualities of a hard, soggy, mud-slimed football rifled through the air, as well as something about the exquisite timing, speed, and courage it takes to catch it on a dead run, with two or three 190-pound men reaching for it at the same time or waiting to crash you as soon as your fingers touch it.

Any football coach during a light practice will let you go down the field and try to catch punts, the long, fifty-yard spirals and the tricky, tumbling end-over-enders. Unless you have had some previous experience, you won't hang on to one out of ten, besides knocking your fingers out of joint. But if you have any imagination, thereafter you will know that it calls for more than negligible nerve to judge and hold that ball and even plan to run with it, when there are two husky ends bearing down at full speed, preparing for a head-on tackle.

In 1932 I covered my first set of National Air Races, in Cleveland, and immediately decided that I had to learn how to fly to find out what that felt like. Riding as a passenger isn't flying. Being up there all alone at the controls of a ship is. And at the same time began a series of investigations into the "feel" of the mechanized sports to see what they were all about and the qualities of mentality, nerve, and physique they called for from their participants. These included a ride with Gar Wood in his latest and fastest speedboat, *Miss America X*, in which for the first time he pulled the throttle wide open on the Detroit River straightaway; a trip with the Indianapolis Speedway driver Cliff Bergere, around the famous brick raceway; and a flip with Lieutenant Al Williams, one time U. S. Schneider Cup race pilot.

I was scared with Wood, who drove me at 127 miles an hour, jounced, shaken, vibrated, choked with fumes from the exhausts, behind which I sat hanging on desperately to the throttle bar, which after a while got too hot to hold. I was on a plank between Wood and his mechanic, Johnson, and thought that my last moment had come. I was still more scared when Cliff Bergere hit 126 on the Indianapolis straightaways in the tiny racing car in which I was hopelessly wedged, and after the first couple of rounds quite resigned to die and convinced that I should. But I think the most scared I have ever been while moving fast was during a ride I took in the cab of a locomotive on the straight, level stretch between Fort Wayne, Indiana, and Chicago, where for a time we hit 90 miles per hour, which of course is no speed at all. But nobody who rides in the comfortable Pullman coaches has any idea of the didoes cut up by a locomotive in a hurry, or the thrill of pelting through a small town, all out and wide open, including the crossing of some

thirty or forty frogs and switches, all of which must be set right. But that wasn't sport. That was just plain excitement.

I have never regretted these researches. Now that they are over, there isn't enough money to make me do them again. But they paid me dividends, I figured. During the great Thompson Speed Trophy race for land planes at Cleveland in 1935, Captain Roscoe Turner was some eight or nine miles in the lead in his big golden, low-wing, speed monoplane. Suddenly, coming into the straightaway in front of the grandstands, buzzing along at 280 miles an hour like an angry hornet, a streamer of thick, black smoke burst from the engine cowling and trailed back behind the ship. Turner pulled up immediately, using his forward speed to gain all the altitude possible, turned and got back to the edge of the field, still pouring out that evil black smoke. Then he cut his switch, dipped her nose down, landed with a bounce and a bump, and rolled up to the line in a perfect stop. The crowd gave him a cheer of sympathy because he had lost the race after having been so far in the lead that had he continued he could not possibly have been overtaken.

There was that story, but there was a better one too. Only the pilots on the field, all of them white around the lips and wiping from their faces a sweat not due to the oppressive summer heat, knew that they were looking at a man who from that time on, to use their own expression, was living on borrowed time. It isn't often when a Thompson Trophy racer with a landing speed of around eighty to ninety miles an hour goes haywire in the air, that the pilot is able to climb out of the cockpit and walk away from his machine. From the time of that first burst of smoke until the wheels touched the ground and stayed there, he was a hundred-to-one shot to live. To the initiated, those dreadful moments were laden with suspense and horror. Inside that contraption was a human being who any moment might be burned to a horrible, twisted cinder, or smashed into the ground beyond all recognition, a human being who was cool, gallant, and fighting desperately. Every man and woman on the field who had ever been in trouble in the air was living those awful seconds with him in terror and suspense. I, too, was able to experience it. That is what makes getting the "feel" of things distinctly worth while.

Biography

IN THE LABORATORY WITH AGASSIZ • SAMUEL SCUDDER

. TOSCANINI • STEFAN ZWEIG

* FORTY RUBLES A MONTH • EVE CURIE

E. B. W. • JAMES THURBER

'MAGGIE' BRYAN • DONALD MOFFAT

IN THE LABORATORY WITH AGASSIZ¹

Samuel H. Scudder

IT WAS more than fifteen years ago [from 1874] that I entered the laboratory of Professor Agassiz, and told him I had enrolled my name in the Scientific School as a student of natural history. He asked me a few questions about my object in coming, my antecedents generally, the mode in which I afterwards proposed to use the knowledge I might acquire, and, finally, whether I wished to study any special branch. To the latter I replied that, while I wished to be well grounded in all departments of zoology, I purposed to devote myself specially to insects.

"When do you wish to begin?" he asked.

"Now," I replied.

This seemed to please him, and with an energetic "Very well!" he reached from a shelf a huge jar of specimens in yellow alcohol.

"Take this fish," said he, "and look at it; we call it a *haemulon*; by and by I will ask what you have seen."

With that he left me, but in a moment returned with explicit instructions as to the care of the object entrusted to me.

"No man is fit to be a naturalist," said he, "who does not know how to take care of specimens."

I was to keep the fish before me in a tin tray, and occasionally moisten the surface with alcohol from the jar, always taking care to replace the stopper tightly. Those were not the days of ground-glass stoppers and elegantly shaped exhibition jars; all the old students will recall the huge neckless glass bottles with their leaky, wax-besmeared corks, half eaten by insects, and begrimed with cellar dust. Entomology was a cleaner science than ichthyology, but the example of the Professor, who had unhesitatingly plunged to the bottom of the jar to produce the fish, was infectious; and though this alcohol had a "very ancient and fishlike smell," I really dared not show any aversion within these sacred precincts, and treated the alcohol as though it were pure water. Still I was conscious of a passing feeling of disappointment, for gazing at a fish did not commend itself to an ardent entomologist. My friends at home, too, were annoyed when they discovered that no amount of eau-de-Cologne would drown the perfume which haunted me like a shadow.

In ten minutes I had seen all that could be seen in that fish, and started in search of the Professor—who had, however, left the Museum; and when I returned, after lingering over some of the odd animals stored in the upper apartment, my specimen was dry all over. I dashed the fluid over the fish as

¹From *Every Saturday* (April 4, 1874) 16, 369-370.

if to resuscitate the beast from a fainting-fit, and looked with anxiety for a return of the normal sloppy appearance. This little excitement over, nothing was to be done but to return to a steadfast gaze at my mute companion. Half an hour passed—an hour—another hour; the fish began to look loathsome. I turned it over and around; looked it in the face—ghastly; from behind, beneath, above, sideways, at a three-quarters' view—just as ghastly. I was in despair; at an early hour I concluded that lunch was necessary; so, with infinite relief, the fish was carefully replaced in the jar, and for an hour I was free.

On my return, I learned that Professor Agassiz had been at the Museum, but had gone, and would not return for several hours. My fellow-students were too busy to be disturbed by continued conversation. Slowly I drew forth that hideous fish, and with a feeling of desperation again looked at it. I might not use a magnifying-glass; instruments of all kinds were interdicted. My two hands, my two eyes, and the fish: it seemed a most limited field. I pushed my finger down its throat to feel how sharp the teeth were. I began to count the scales in the different rows, until I was convinced that that was nonsense. At last a happy thought struck me—I would draw the fish; and now with surprise I began to discover new features in the creature. Just then the Professor returned.

"That is right," said he; "a pencil is one of the best of eyes. I am glad to notice, too, that you keep your specimen wet, and your bottle corked."

With these encouraging words, he added:

"Well, what is it like?"

He listened attentively to my brief rehearsal of the structure of parts whose names were still unknown to me: the fringed gill-arches and movable operculum; the pores of the head, fleshy lips and lidless eyes; the lateral line, the spinous fins and forked tail; the compressed and arched body. When I had finished, he waited as if expecting more, and then, with an air of disappointment:

"You have not looked very carefully; why," he continued more earnestly, "you haven't even seen one of the most conspicuous features of the animal, which is as plainly before your eyes as the fish itself; look again, look again!" and he left me to my misery.

I was piqued; I was mortified. Still more of that wretched fish! But now I set myself to my task with a will, and discovered one new thing after another, until I saw how just the Professor's criticism had been. The afternoon passed quickly; and when, toward its close, the Professor inquired:

"Do you see it yet?"

"No," I replied, "I am certain I do not, but I see how little I saw before."

"That is next best," said he, earnestly, "but I won't hear you now; put

away your fish and go home; perhaps you will be ready with a better answer in the morning. I will examine you before you look at the fish."

This was disconcerting. Not only must I think of my fish all night, studying, without the object before me, what this unknown but most visible feature might be; but also, without reviewing my discoveries, I must give an exact account of them the next day. I had a bad memory; so I walked home by Charles River in a distracted state, with my two perplexities.

The cordial greeting from the Professor the next morning was reassuring; here was a man who seemed to be quite as anxious as I that I should see for myself what he saw.

"Do you perhaps mean," I asked, "that the fish has symmetrical sides with paired organs?"

His thoroughly pleased "Of course! of course!" repaid the wakeful hours of the previous night. After he had discoursed most happily and enthusiastically—as he always did—upon the importance of this point, I ventured to ask what I should do next.

"Oh, look at your fish!" he said, and left me again to my own devices. In a little more than an hour he returned, and heard my new catalogue.

"That is good, that is good!" he repeated; "but that is not all; go on"; and so for three long days he placed that fish before my eyes, forbidding me to look at anything else, or to use any artificial aid. "Look, look, look," was his repeated injunction.

This was the best entomological lesson I ever had—a lesson whose influence has extended to the details of every subsequent study; a legacy the Professor has left to me, as he has left it to many others, of inestimable value, which we could not buy, with which we cannot part.

A year afterward, some of us were amusing ourselves with chalking outlandish beasts on the Museum blackboard. We drew prancing starfishes; frogs in mortal combat; hydra-headed worms; stately crawfishes, standing on their tails, bearing aloft umbrellas; and grotesque fishes with gaping mouths and staring eyes. The Professor came in shortly after, and was as amused as any at our experiments. He looked at the fishes.

"Haemulons, every one of them," he said; "Mr. —— drew them."

True; and to this day, if I attempt a fish, I can draw nothing but haemulons.

The fourth day, a second fish of the same group was placed beside the first, and I was bidden to point out the resemblances and differences between the two; another and another followed, until the entire family lay before me, and a whole legion of jars covered the table and surrounding shelves; the odor had become a pleasant perfume; and even now, the sight of an old, six-inch, worm-eaten cork brings fragrant memories.

The whole group of haemulons was thus brought in review; and, whether engaged upon the dissection of the internal organs, the preparation and examination of the bony framework, or the description of the various parts, Agassiz's training in the method of observing facts and their orderly arrangement was ever accompanied by the urgent exhortation not to be content with them.

"Facts are stupid things," he would say, "until brought into connection with some general law."

At the end of eight months, it was almost with reluctance that I left these friends and turned to insects; but what I had gained by this outside experience has been of greater value than years of later investigation in my favorite groups.

TOSCANINI¹

Stefan Zweig

I love him who yearns for the impossible.

Second part of *Faust*

ANY attempt to detach the figure of Arturo Toscanini from the fugitive element of the music re-created under the magical spell of his baton, and to incorporate it in the more enduring substance of the written word, must, willy-nilly, become something more than the mere biography of a conductor. He who tries to describe Toscanini's services to the Spirit of Music and his wizard's influence over his audiences is describing, above all, an ethical deed. For Toscanini is one of the sincerest men of our time, devoting himself to the service of art with such fidelity, ardour, and humility as we are rarely privileged to admire in any other sphere of creative activity. He bows his head before the higher will of the master he interprets, so that he combines the mediating function of the priest with the fervour of the disciple, combines the strictness of the teacher with the unrelenting diligence and veneration of the pupil. This guardian of the hallowed and primal forms of music is always concerned with an integral effect rather than with detail, with faithful representation rather than with outward success. Since he invariably puts into his work his personal genius and the whole of his peculiar moral and spiritual energy, what he does sets an example, not in the realm of music alone, but for all artists in every domain. His individual triumphs transcend the boundaries of music to become the supra-personal victory of creative will

¹From *Toscanini* by Paul Stefan. Copyright 1936 by The Viking Press, Inc., New York.

over the inertia of matter—a splendid proof that, even in a disintegrated and shattered age like ours, now and again it is possible for the gifted few to achieve the miracle of perfection.

For the fulfilment of his colossal task Toscanini has, year after year, steeled his soul with unparalleled inflexibility. Nothing but perfection will satisfy him. Thus he shoulders his burden, and manifests his moral grandeur. The fairly good, the nearly perfect, the approximate, he cannot endure. Toscanini detests compromise in all its forms, abominates an easy-going satisfaction. In vain will you remind him that the perfect, the absolute, are rarely attainable in this world; that, even to the sublimest will, no more is possible than an approach to perfection, since perfection is God's attribute, not man's. His glorious unwisdom makes it impossible for him to recognize this wise dispensation. For him the idea of the absolute is supreme in art; and like one of Balzac's heroes, he devotes his whole life to "*la recherche de l'absolu*." Now, the will of one who persistently endeavours to attain the unattainable has irresistible power both in art and in life.

When Toscanini wills, all must will; when he commands, all must obey. Every musician who has been guided by the movements of his wonder-working baton will testify that, within the range of the elemental energy that radiates from it, lassitude and inaccuracy are dispelled. By a mysterious induction some of his own electrical energy passes from him into every muscle and nerve, not only of the members of the orchestra, but also of all those who come to hear and to enjoy Toscanini's will; for as soon as he addresses himself to his task, each individual is inspired with the power of a divine terror, with a communicable strength which, after an initial phase of palsied alarm, induces in those affected by it a might which greatly transcends the ordinary. The discharge of his own tensions increases the capacity for musical appreciation of those who happen to be in his neighbourhood, expanding the faculties of every musician and, one might even say, of the lifeless instruments as well. As out of every score he extracts its most deeply hidden mysteries, so, with his unceasing demands, does he extract from every performer in the orchestra the utmost of which each is capable, imposing a fanatical zeal, a tenseness of will and execution, which the individual, unstimulated by Toscanini, has never before known and may never again experience.

This forcible stimulation of the will is no easy or comfortable matter. Perfectionment must be fought for sternly, savagely, indefatigably. One of the most marvelous spectacles of our day, one of the most glorious revelations to every creative or interpretative artist, an hour never to be forgotten is the privilege of watching Toscanini when engaged in his struggle for perfection, in his contest for the maximum effect. The onlooker is enthralled, breathless,

almost terrified, as he beholds. In general an artist's fight for supreme achievement takes place in privacy. The poet, the novelist, the painter, the composer, works alone.

From sketches and from much-corrected manuscripts one must guess the ardours of creation. But whoever witnesses a rehearsal conducted by Toscanini sees and hears Jacob wrestling with the angel—sights and sounds no less alarming and splendid than a thunderstorm.

In whatever medium an artist works, the study of Toscanini will help to keep him faithful to his ideals, that he may resemble the conductor who, with sublime patience and sublime impatience, constrains to fit into the scheme of a flawless vision so much that, but for him, would remain rough-hewn and indistinct. For—and this is Toscanini's most salient characteristic—his interpretation of a work does not come into being at rehearsal. A symphony he is to conduct will have been thoroughly worked over in his mind from the score, and the finest shades of its tonal reproduction will have been settled for him long before he takes his place at the desk. A rehearsal, for him, is no more than an instrumental adaptation to what he has already heard again and again with the mind's ear. His extraordinary frame needs only three or four hours' sleep in the twenty-four. Night after night he sits up, the composer's text close to his near-sighted eyes, scanning it bar by bar, note by note. He weighs every modulation, scrupulously ponders every tone, mentally rehearses the rhythmic combinations.

Since he is a man of unrivalled memory, the whole and the parts become incorporated into his being, and the written score is henceforward little more than waste paper. Just as in a Rembrandt etching the lightest line has made its peculiar, its personal contribution to the copper plate, so in Toscanini's most musical of brains has every phrase been indelibly registered before he begins to conduct the first rehearsal. All that remains for him to do is to impose on others the clarity of his own will; to transform his Platonic idea, his perfected vision, into orchestrated sound; to ensure the concerted outward reproduction of the music that exists in his mind; to make a multiplicity of instrumentalists obey the law which for him has already been formulated in imagined perfection.

This is an enterprise bordering on the impossible. An assemblage of persons having different temperaments and talents is to work as a unit, fulfilling and realizing, with photographic and phonographic accuracy, the inspired vision of one individual. A thousand times Toscanini has made a success of this undertaking, which is at once his torment and his delight. To have watched the process of unceasing assimilation whereby he transforms multiplicity into unity, energetically clarifying the vague, is a memorable lesson for

anyone who reverences art in its highest form as symbolical of morality. It is thus that during rehearsal observer and auditor come to understand that Toscanini's work is ethical as well as artistic.

Public performance discloses to connoisseurs, to artists, to virtuosi, Toscanini as a leader of men, Toscanini celebrating one of his triumphs. This is the victorious march into the conquered realm of perfection. At rehearsal, on the other hand, we witness the struggle for perfection. There alone can be discerned the obscure but genuine and tragical image of the fighter; there alone are we enabled to understand the courage of Toscanini the warrior. Like battlefields, his rehearsals are full of the tumult and the fever of fluctuating successes. In them, and only in them, are the depths of Toscanini's soul revealed.

Every time he begins a rehearsal, it is, in very truth, as if he were a general opening a campaign; his outward aspect changes as he enters the hall. At ordinary times, when one is alone with him, or with him among a circle of intimates, though his hearing is extraordinarily acute, one is inclined to fancy him rather deaf. Walking or sitting he has his eyes fixed on vacancy, in a brown study, his arms folded, his brows knitted, a man aloof from the world. Though the fact is shown by no outward signs, something is at work within him; he is listening to inner voices, is in a reverie, with all his senses directed inward. If you come close to him and speak to him, he starts; half a minute or more may elapse before his deep-set dark eyes light up to recognize even a familiar friend, so profoundly has he been shut away, spiritually deaf to everything but the inner music. A day-dreamer, in the isolation and concentration of the creative and interpretative artist—such is Toscanini when not "on the battlefield."

Yet the instant he raises his baton to undertake the mission he is to fulfill, his isolation is transformed into intimate communion with his fellows, his introspection is replaced by the alertness of the man of action. His figure stiffens and straightens; he squares his shoulders in martial fashion; he is now the commandant, the governor, the dictator. His eyes sparkle beneath their bushy brows; his mouth is firmly set; his movements are brisk, those of one ready for all emergencies, as he steps up to the conductor's desk and, with Napoleonic glance, faces his adversaries. For that is what the waiting crowd of instrumentalists has become to him at this supreme instant—adversaries to be subjugated, persons with conflicting wills, who have to be mastered, disciplined, and brought under the reign of law. Encouragingly he greets his fellow-musicians, lifts his baton, and therewith, like lightning into a lightning-rod, the whole power of his will is concentrated into this slender staff.

A wave of the magic wand, and elemental forces are unchained; rhythmi-

cally the orchestra is guided by his clear-cut and virile movements. On, on, on; we feel, we breathe, in unison. Suddenly (the sudden cessation hurts, and one shrinks as from the thrust of a rapier), the performance, which to us, less sensitive than the conductor, has seemed to be going flawlessly, is stopped by a sharp tap on the desk. Silence fills the hall, till the startling stillness is startlingly broken by Toscanini's tired and irritable "Ma no! Ma no!" This abrupt negative, this pained exclamation, is like a sigh of reproach. Something has disturbed him. The sound of the instruments, plain to us all, has been discordant with the music of Toscanini's vision, audible to him alone.

Quietly, civilly, speaking very much to the point, the conductor now tries to make the orchestra understand how he feels the music ought to be rendered. He raises his baton once more, and the faulty phrase is repeated, less faultily indeed; but the orchestral reproduction is not yet in full harmony with the master's inward audition. Again he stops the performance with a tap. This time the explanation that ensues is less patient, more irritable. Eager to make his meaning perfectly plain, he uses all his powers of persuasion, and so great is his faculty for expression that in him the gesticulative talent proper to an Italian rises to the pitch of genius. Even the most unmusical of persons cannot fail to grasp, from his gestures, what he wants, what he demands, when he demonstrates the rhythm, when he imploringly throws his arms wide, and then fervently clasps them at his breast, to stress the need for a more lively interpretation; or when, setting his whole body plastically to work, he gives a visual image of the tone-sequences in his mind. More and more passionately does he employ the arts of persuasion, imploring, miming, counting, singing; becoming, so to say, each instrument in turn as he wishes to stimulate the performer who plays it; one sees him making the movements of a violinist, a flautist, a kettledrummer. If the reader will glance at the rehearsal-photographs in this book, he will see that a sculptor who should wish to represent desire and impatience, yearning, tension, and urgency, could find no more satisfactory model than Toscanini gesticulating to the orchestra.

But if, despite this fiery incitation, despite this urgent exemplification, the orchestra still fails to grasp and to fulfil the conductor's wishes, Toscanini's suffering at their non-success and their mortal fallibility becomes intense. Distressed by the discordancy between the orchestral performance and the inward audition, he groans like a sorely wounded man, and seems beside himself because he cannot get on properly with his work. Forgetting the restraints of politeness, losing control, in his wrath against the stupidity of material obstacles, he rages, curses, and delivers volleys of abuse. It is easy to understand why none but his intimates are allowed to attend these rehearsals, at which he knows he will be overcome by his insatiable passion for perfection.

More and more alarming grows the spectacle of the struggle, as Toscanini strives to wring from the instrumentalists the visioned masterpiece which has to be fashioned in the sphere of universally audible reality. His body quivers with excitement, his voice becomes hoarse, his brow is beaded with sweat; he looks exhausted and aged by these immeasurable hours of strenuous toil; but never will he stop an inch short of the perfection of his dream. With unceasingly renewed energy, he pushes onward and onward until the orchestra has at length been subjected to his will and can interpret the composer's music exactly as it has presented itself to the great conductor's mind.

Only he who has been privileged to witness this struggle for perfection hour after hour, day after day can grasp the heroism of a Toscanini; he alone can estimate the cost of the super-excellence which the public has come to expect as a matter of course. In truth the highest levels of art are never attained until what is enormously difficult seems to have been attained with consummate ease, until perfection appears self-evident. If you see Toscanini of an evening in a crowded concert-hall, the magician who holds sway over the dutiful instrumentalists, guiding them as if they were hypnotized by the movements of his baton, you might think his triumph won without effort—himself, the acme of security, the supreme expression of victory. In reality Toscanini never regards a task as definitively performed. What the public admires as completion has for him already become once more a problem. After fifty years' study of a composition, this man who is now verging upon seventy is never wholly satisfied with the results; he can in no case get beyond the stimulating uncertainty of the artist who is perpetually making new trials. Not for him a futile comfort; he never attains what Nietzsche calls the "brown happiness" of relaxation, of self-content. No other living man perhaps suffers so much as does this superlatively successful conductor from the imperfection of all the instrumental reproduction as compared with the music of his dreams.

Other inspired conductors are at least vouchsafed fleeting moments of rapture. Bruno Walter, for example, Toscanini's Apollonian brother in the realm of music, has them (one feels) from time to time. When he is playing or conducting Mozart, his face is now and again irradiated by the reflection of ecstasy. He is upborne on the waves of his own creation; he smiles unwittingly; he dreams as he is dandled in the arms of music.

But Toscanini, the insatiable, the captive of his longing for perfection, is never granted the grace of self-forgetfulness. He is consumed, as with undying fires, by the craving for ever-new forms of perfection. The man is absolutely sincere, incapable of pose. There is nothing studied about his behaviour when, at the close of every concert, during the salvos of applause, he looks embarrassed and ashamed as he retires, coming back reluctantly and

only through politeness when forced to respond to the acclamations of the audience. For him all achievement is mysteriously mournful. He knows that what he has so heroically wrested from fate is pre-eminently perishable; he feels, like Keats, that his name is "writ in water." The work of an interpretative artist cannot endure; it exists only for the moment, and leaves nothing that the senses of coming generations will be able to delight in. Thus his successes, magnificent though they are, can neither delude nor intoxicate him. He knows that in the sphere of orchestral reproduction there is nothing perdurable; that whatever is achieved must be re-achieved from performance to performance, from hour to hour. Who can be better aware than this man, to whom peace and full fruition are denied because he is insatiable, that art is unending warfare, not a conclusion but a perpetual recommencement?

Such moral strictness of conception and character is a signal phenomenon in art and in life. Let us not repine, however, that so pure and so disciplined a manifestation as Toscanini is a rarity, and that only on a few days each year can we enjoy the delight of having works so admirably presented to us by this master of his craft. Nothing can detract more from the dignity and the ethical value of art than the undue facility and triteness of its presentation thanks to the marvels of modern technique, whereby wireless and gramophone offer the sublime at any moment to the most indifferent; for thanks to this ease of presentation, most people forget the labour of creation, consuming the treasures of art as thoughtlessly and irreverently as if they were swilling beer or munching bread.

It is therefore, in such days as ours, a benefaction and a spiritual joy to behold one who so forcibly reminds us that art is sacramental labour, is apostolical devotion to the perpetually elusive and divine elements in our world; that it is not a chance gift of luck, but a hard-earned grace; is more than tepid pleasure, being likewise, and before all, creative need. In virtue of his genius and in virtue of his steadfastness of character, Toscanini has wrought the miracle of compelling millions to accept our glorious patrimony of music as a constituent part of the living present. This interpretative wonder bears fruit far beyond its obvious frontiers; for what is achieved within the domain of any one art is an acquirement for art in general. Only an exceptional man imposes order upon others, and nothing arouses profounder veneration for this outstanding apostle of faithfulness in work than his success in teaching a chaotic and incredulous epoch to feel fresh reverence for its most hallowed heritage.

FORTY RUBLES A MONTH¹

Eve Curie

YES, Marie's existence had still further to be despoiled and made bare. The few months she had lived in the Rue d'Allemagne had been a stage in acclimatization. Now the girl sank slowly into solitude. The beings she rubbed elbows with existed for her no more than the walls she touched in passing, and conversation hardly cut in upon the silence in which she enveloped her hours. For more than three solid years she was to lead a life devoted to study alone: a life in conformity with her dreams, a "perfect" life in the sense in which that of the monk or the missionary is perfect.

Her life had to be of monastic simplicity in any case: for since Marie had voluntarily deprived herself of the board and lodging she had had at the Dluskis', she had to meet her expenses herself. And her income—made up by her own savings, divided in slices, and the small sums her father could send her—resolved itself into forty rubles a month.

How could a woman, a foreigner, live decently in Paris in 1892 with forty rubles a month, *three francs* a day, paying for her own room, meals, clothes, paper and books, as well as her fees at the university? Such was the problem the young student had urgently to solve. But Marie never failed to find the solution of a problem.

Manya to her brother Joseph, March 17, 1892:

You have no doubt learned from Father that I decided to live nearer to the schools, as it had become necessary for several reasons, above all for the present quarter. The plan is now realized: I am writing to you, in fact, from my new lodging, 3 Rue Flatters. It is a little room, very suitable, and nevertheless very cheap. In a quarter of an hour I can be in the chemistry laboratory, in twenty minutes at the Sorbonne. Naturally, without the Dluskis' help I should never have been able to arrange things like this.

I am working a thousand times as hard as at the beginning of my stay: in the Rue d'Allemagne my little brother-in-law had the habit of disturbing me endlessly. He absolutely could not endure having me do anything but engage in agreeable chatter with him when I was at home. I had to declare war on him on this subject. After a few days Bronya and he began to feel badly about me, and they came to see me. We drank tea, bachelor fashion, and then we went downstairs to see the S.'s, who also live here.

Is your wife taking care of Father, as she promised me? Let her take care, just the same, not to cut me out altogether at home! Father is beginning to speak of her a little too tenderly, and I am afraid that he will be forgetting me soon. . . .

¹From *Madame Curie: A Biography*, by Eve Curie, copyright, 1937, by Doubleday, Doran & Company, Inc.

Marie was not the only student who lived on a hundred francs a month in the Latin Quarter: most of her Polish comrades were as poor as she was. Some lived by threes or fours in the same lodging and took their meals together; others, who lived alone, devoted several hours a day to housekeeping, cooking and sewing, and by sheer ingenuity ate as much as they wanted, shod and clothed themselves in greater or lesser elegance. This was the method adopted earlier by Bronya, whose talents as a prize cook had been celebrated among her comrades.

Marie disdained to follow such wise examples. She was too fond of her tranquility to share her lodging with a friend or two. She was too haunted by work to bother about her own comfort. Even if she had wished to do so, for that matter, she would have been incapable of it: the girl who had been a governess in strange families at seventeen, giving seven or eight hours of lessons a day, had never found time or occasion for learning how to keep house. Everything that Bronya had learned when she was mistress of her father's house was unknown to Marie. And the report had it, in the Polish colony, that "Mademoiselle Sklodovska doesn't know what you use to make soup."

She did not know, and she did not want to know. Why should she pass a morning initiating herself into the mysteries of a broth, when she might have been learning several pages of physics, or making an interesting analysis in the laboratory?

By deliberate intention she had suppressed diversions from her schedule, as well as friendly meetings and contact with human beings. In the same way she decided that material life had no importance; that it did not exist. And, fortified by this principle, she made for herself a Spartan existence, strange and inhuman.

Rue Flatters, Boulevard Port-Royal, Rue des Feuillantines. . . . All the rooms Marie was to inhabit were alike in discomfort and cheapness of rent. The first was situated in a poorly furnished house where students, doctors and officers of the neighboring garrison lived. Later on the girl, in search of absolute calm, was to take an attic like a servant's room at the top of a middle-class house. For fifteen or twenty francs a month she found a tiny nook which obtained light from a loophole giving directly on the slope of the roof. Through this skylight appeared a small square of the sky. There was no heat, no lighting, no water.

Marie furnished this place with all the objects she possessed: an iron folding bed, the mattress she had brought from Poland, a stove, a white wooden table, a kitchen chair, a washbasin; a petroleum oil lamp, covered by a two-penny shade; a pitcher which she had to fill at the tap on the landing; an

alcohol heater about as big as a saucer, which was to cook her meals for the next three years; two plates, a knife, a fork, a spoon, a cup, a stewpan; and finally a kettle and three glasses into which, according to Polish custom, the student would pour tea when the Dluškis came to see her. On the occasions—very rare at present—when Marie received visitors, the rights of hospitality were asserted: the girl lighted the little stove, whose zigzag pipe described complicated angles in the room. And for a seat she pulled out of its corner the bulging brown trunk which served her as wardrobe and chest of drawers.

No service, of course: even one hour of cleaning a day would have over-weighted the expense side of the budget. Transportation costs were suppressed: Marie went to the Sorbonne on foot in all weathers. Coal was kept down to a minimum: one or two sacks of "lumps" for the winter, which the girl bought from the merchant on the corner and hoisted up the steep stairs herself to the sixth floor, bucketful by bucketful, stopping at each floor to breathe. Lights were at a minimum: as soon as night fell, the student took refuge in that blessed asylum called the Library of Sainte-Geneviève, where the gas was lighted and it was warm. Seated at one of the big rectangular tables with her head in her hands, a poor Polish girl could work until they closed the doors at ten o'clock. From then on all that was needed was enough petroleum to keep the light going in her room until two in the morning. Then, with her eyes reddened by fatigue, Marie left her books and threw herself on the bed.

The only thing she knew how to do, in the humble practical domain, was to sew—a memory of the "manual training" at the Sikorski boarding school, and of the long days in Szczuki when the governess, as she supervised the children's study, took up her sewing. . . . It would be rash to conclude from this that the exile ever, by chance, bought a bit of stuff at a low price and made herself a new blouse. She seems to have sworn, on the contrary, never to give up her Warsaw dresses, and wore them, shiny, old-fashioned and threadbare, forever. But she took great care of her clothes, cleaned them and mended them. She also condescended to wash her linen in a basin when she was too tired to work and needed relaxation.

Marie did not admit that she could be cold or hungry. In order not to buy coal—and through sheer carelessness too—she often neglected to light the little stove with the twisted pipe, and she wrote figures and equations without noticing that her fingers were getting numb and her shoulders shaking. A hot soup or a bit of meat would have comforted her; but Marie did not know how to make soup. Marie could not spend a franc and lose a half hour to cook herself a chop. She hardly ever entered the butcher's shop, and even less the restaurant: it was too dear. For weeks at a time she ate nothing but buttered bread and tea. When she wanted a feast, she went into a creamery in the Latin

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Quarter and ate two eggs, or else bought herself a piece of chocolate or some fruit.

On this diet the fresh, solid girl who had left Warsaw a few months before rapidly grew anaemic. Often, as she was getting up from her table, her head would go round. She had just time to get to her bed when she would lose consciousness. Coming back to herself, she would ask why she had fainted; she would think herself ill and disdain her illness as she did everything else. It never occurred to her that she was dropping with weakness and that her only disease was that of starvation.

Naturally, she did not boast of this superb organization of existence to the Dluskis. Every time she went to see them she replied in monosyllables to their questions on her progress as a cook, or on her daily menus. If her brother-in-law said she did not look well, she affirmed that she was overworked—which was, in fact, in her eyes, the only reason for her fatigue. And then, dismissing such worries with a gesture of indifference, she would begin to play with her niece, Bronya's baby, for whom she had great affection.

But one day when Marie fainted in front of one of her comrades, the latter hurried to the Rue d'Allemagne to warn the pair of young doctors. Two hours later Casimir was leaping up the six flights of stairs to the attic where the girl, a little pale, was already studying tomorrow's lesson. He examined his sister-in-law. He examined even more carefully the clean plates, the empty stewpan, and the whole room, in which he could discover only one comestible, a packet of tea. All at once he understood—and the questioning began.

"What did you eat today?"

"Today? I don't know. I lunched a while ago."

"What did you eat?" Casimir's voice took her up implacably.

"Some cherries and . . . and all sorts of things."

In the end Marie was obliged to confess: since the evening before she had nibbled at a bundle of radishes and half a pound of cherries. She had worked until three that morning and had slept four hours. Then she had gone to the Sorbonne. On her return she had finished the radishes. Then she had fainted.

The doctor made no long speeches. He was furious. Furious against Marie, whose ash-gray eyes looked at him with profound fatigue and innocent mirth. Furious at himself, for he accused himself of not watching attentively enough over "the little one" who had been confided to him by M. Sklodovski. Without listening to his sister-in-law's protests he handed her her hat and coat, and ordered her to take the books and papers she would need for the coming week. Then, silent, dissatisfied, unhappy, he carried her off to La Villette; from the threshold of the flat he hailed Bronya, who dashed for the kitchen.

Twenty minutes passed, and Marie swallowed, mouthful by mouthful, the medicines ordered for her by Casimir: an enormous underdone beefsteak and a plateful of crackling fried potatoes. As if by a miracle, the color came back to her cheeks. On the same evening Bronya herself came at eleven o'clock to put the light out in the narrow room where she had set up a bed for her sister. For several days Marie, well fed and cared for, "took the cure" and regained her strength. Then, obsessed by the approaching examinations, she returned to her attic, promising to be reasonable in the future.

And the next day she began again to live on air.

Work! . . . Work! Plunged altogether into study, intoxicated by her progress, Marie felt herself equal to learning everything mankind had ever discovered. She attended courses in mathematics, physics and chemistry. Manual technique and the minute precision of scientific experiment became familiar to her, little by little; soon she was to have the joy of being charged by Professor Lippmann with researches of no great importance, which nevertheless permitted her to show her deftness and the originality of her mind. In the physics laboratory of the Sorbonne, a high and wide room queerly ornamented by two little staircases which led to an interior gallery, Marie Skłodovska timidly tried her strength.

She had a passionate love for that atmosphere of attention and silence, the "climate" of the laboratory, which she was to prefer to any other up to her last day. She was on her feet, always on her feet, in front of an oak table supporting precision instruments, or else in front of the chemical hood where some material in fusion bubbled away, worried at by the fierce blowpipe. She was hardly to be distinguished, in her big smock of wrinkled linen, from the thoughtful young men who bent beside her over other blowpipes and other instruments. Like them, she respected the concentration of the place. She made no noise, she pronounced no useless word.

One master's degree was not enough; Marie decided to obtain two: one in physics and one in mathematics. Her plans, once so humble, increased and grew richer so rapidly that she had not the time—and above all not the audacity—to confide them to M. Skłodovski, who, as she knew, impatiently awaited her return to Poland. As usual, the excellent man offered his help. But it could be felt that he was vaguely worried at having hatched this independent creature who had taken to flying with her own wings after so many years of submission and sacrifice.

M. Skłodovski to Bronya, March 5, 1893:

. . . Your last letter mentions for the first time that Manya intends to take her examinations for the master's. She has never spoken to me about it in her letters,

even though I have questioned her on the subject. Write me exactly when these examinations will take place, at what date Manya can hope to pass them, what are the fees for them and how much the diploma will cost. I must think of all this in advance so as to be able to send some money to Manya, and on this my personal plans will depend.

. . . I intend to keep the lodging I now occupy for next year: for myself and for Manya—if she comes back—it is perfectly suitable.

. . . Little by little Manya will work up a list of pupils, and in any case I am ready to share what I have with her. We shall manage without trouble. . . .

Marie, however shy she might be, could not avoid meeting human beings every day. Some of the students were cordial and friendly with her. Foreign women were highly regarded at the Sorbonne. These poor girls, generally gifted, coming from far away to the university which the Goncourts called "the nursing mother of study," inspired sympathy among young Frenchmen. The Polish girl was tamed. She discovered that her companions, who were "grinds" for the most part, esteemed her and wished to show her kindness. This kindness sometimes would have liked to become extremely kind indeed. Marie must have been very pretty: her friend, Mlle Dydynska, a charming and somewhat over-excited young woman who had appointed herself as body-guard, one day threatened to beat off a group of too-eager admirers with her umbrella.

Allowing Mlle Dydynska to repel advances which left her indifferent, the girl drew nearer to men who did not pay court to her and with whom she could talk about her work. Between a physics lesson and a laboratory hour she would chatter with Paul Painlevé, who was already a professor; with Charles Maurain or Jean Perrin—future leaders of French science. These were distant comradeships. Marie had no time to give to friendship or to love. She loved mathematics and physics.

Her brain was so precise, her intelligence so marvelously clear, that no "Slavic" disorder intruded to corrupt her effort. She was supported by a will of iron, by a maniacal taste for perfection, and by an incredible stubbornness. Systematically, patiently, she attained each of the ends she had set for herself: she passed first in the master's examination in physics in 1893,² and second in the master's in mathematics in 1894³.

She had decided to know the French language perfectly, as it was indispensable to her; and instead of cooing incorrect, sing-song sentences for years, as many Poles do, she learned her spelling and syntax with infallible sureness, and hounded down the very last traces of her accent. Only a very slight rolling

²Licence ès Sciences Physiques.

³Licence ès Sciences Mathématiques.

of the "r" was to remain ever afterward as one of the graces of her rather muted voice, so sweet and charming.

With her forty rubles a month she succeeded in living, and even, by depriving herself of the indispensable, achieved sometimes a certain amount of luxury: an evening at the theater, a journey to the suburbs, whence she brought back flowers picked in the woods to glow for several days on her table. The little peasant of other days was not dead; lost in the great city, she lay in wait for the birth of the leaves, and as soon as she had a little time and money she hurried to the woods.

Marie to M. Skłodowski, April 16, 1893:

The other Sunday I went to Le Raincy, near Paris, in a pretty and agreeable neighborhood. The lilacs and the fruit trees, even the apples, were in full bloom and the air was filled with the scent of flowers.

In Paris the trees get green as early as the beginning of April. Now the leaves have sprung out and the chestnuts are blooming. It is as hot as in summer: everything is green. In my room it is beginning to be torrid. Luckily in July, when I shall be working for my examinations, I shall not be here any more, for I have taken the lodging only to the eighth of July.

The nearer the examinations come, the more I am afraid of not being ready. At the worst, I shall wait until November, but that will make me lose my summer, which doesn't appeal to me. For that matter, we must wait and see. . . .

July. Fever, haste, agonizing trials, crushing mornings when, shut in with thirty students in the examination hall, Marie was so nervous that the letters danced before her eyes and she could not even read the fateful paper for several minutes, with its statement of the problem and the "questions on the course." When the composition was turned in, there came days of waiting until the solemn moment of publication of the results. Marie slipped in among the contestants and their families, crowded into the amphitheater where the names of the elect would be read aloud, in order of merit. Pushed and shoved about as she was, she waited for the entrance of the examiner. And in a sudden silence she heard him pronounce first of all her own name: *Marie Skłodowska*.

Nobody was to guess her emotion. She tore herself away from the congratulations of her comrades, escaped from the crowd and made off. The time for holidays had come now—for the departure to Poland and home.

Such homecomings among the poor Poles had their rites, which Marie scrupulously observed. She moved her furniture—bed, stove and utensils—into safety with a compatriot rich enough to keep her Paris lodging during the summer months. She took leave of her garret: before quitting it forever, she cleaned it thoroughly. She said good-by to the portress, whom she would

not see again, and bought some provisions for her journey. Having counted up what she had left, she went into a big shop and did what she had not done for a year: she looked for trinkets, for scarves. . . .

It was accounted a shame to return to one's native land with money in the pocket. Grand style, supreme elegance, the law, required one to spend literally everything on presents for one's family and get into the train at the Gare du Nord without a sou. Was this not a wise course? Two thousand kilometers away, at the other end of the rails, there were M. Sklodovski and Joseph and Hela, a familiar roof to sleep under, as much food as one could eat, and a seamstress who, for a few *groszy*, could cut out and sew linen and big woollen dresses: the dresses which Marie would wear when she came back to the Sorbonne again in November.

She was to reappear there cheerful and a bit too fat, having been stuffed with food for three months in all the houses of all the Sklodovskis in Poland, indignant as they were at her thinness. And again she faced a scholastic year in which she would work, learn, prepare an examination, grow thin.

But each time the autumn returned the same anxiety assailed Marie: how could she go back to Paris? Where was she to find money? Forty rubles at a time, her savings were being exhausted; and she thought with shame of the little pleasures her father deprived himself of to come to her help. In 1893 the situation seemed desperate and the girl was on the point of giving up the journey when a miracle took place. That same Mlle Dydyńska who had defended her with an umbrella the year before now extended even more opportune protection. Certain that Marie was destined to a great future, she moved heaven and earth in Warsaw to have the "Alexandrovitch Scholarship" assigned to her—a scholarship for students of merit who wished to pursue their efforts abroad.

Six hundred rubles! Enough to live on for fifteen months! Marie, who knew so well how to ask favors for other people, would never have thought of soliciting this help, and above all could never have had the boldness to make the necessary approaches. Dazzled and enchanted, she took flight for France.

Marie to her brother Joseph, September 15, 1893:

. . . I have already rented my room, on the sixth floor, in a clean and decent street which suits me very well. Tell Father that in that place where I was going to take a room there was nothing free, and that I am very satisfied with this room: it has a window that shuts tight, and when I have arranged it properly it should not be cold here, especially as the floor is of wood and not tiles. Compared to my last year's room it is a veritable palace. It costs one hundred and eighty francs a year, and is therefore sixty francs cheaper than the one Father spoke to me about.

I hardly need say that I am delighted to be back in Paris. It was very hard for me to separate again from Father, but I could see that he was well, very lively, and that he could do without me—especially as you are living in Warsaw. And as for me, it is my whole life that is at stake. It seemed to me, therefore, that I could stay on here without having remorse on my conscience.

Just now I am studying mathematics unceasingly, so as to be up to date when the courses begin. I have three mornings a week taken by lessons with one of my French comrades who is preparing for the examination I have just passed. Tell Father that I am getting used to this work, that it does not tire me as much as before, and that I do not intend to abandon it.

Today I begin the installation of my little corner for this year—very poorly, but what am I to do? I have to do everything myself; otherwise it's all too dear. I must get my furniture into shape—or rather what I pompously call my furniture, for the whole thing isn't worth more than twenty francs.

I shall write soon to Joseph Boguski and ask him for information about his laboratory. My future occupation depends on this.

Marie to her brother, March 18, 1894:

. . . It is difficult for me to tell you about my life in detail; it is so monotonous and, in fact, so uninteresting. Nevertheless I have no feeling of uniformity and I regret only one thing, which is that the days are so short and that they pass so quickly. One never notices what has been done; one can only see what remains to be done, and if one didn't like the work it would be very discouraging.

I want you to pass your doctor's thesis. . . . It seems that life is not easy for any of us. But what of that? We must have perseverance and above all confidence in ourselves. We must believe that we are gifted for something, and that this thing, at whatever cost, must be attained. Perhaps everything will turn out very well, at the moment when we least expect it. . . .

The Alexandrovitch Scholarship was providential. With passionate avarice Marie tried to string out her six hundred rubles, so as to remain a little longer in the paradise of lecture halls and laboratories. Some years later, with the same passionate avarice, she was to save six hundred rubles out of her first earnings—a technical study ordered from her by the Society for the Encouragement of National Industry—and was to take them to the secretary of the Alexandrovitch Foundation, stupefied though he was at a restitution without precedent in the annals of the committee. Marie had accepted this scholarship as testimony of confidence in her, a debt of honor. In her uncompromising soul she would have adjudged herself dishonest if she had kept for one unnecessary moment the money which now could serve as life buoy to another poor young girl.

Rereading a little poem of my mother's, written in Polish, on this time of her life, and remembering the accounts of it that she sometimes gave me, with many a smile and humorous remark, looking at the only portrait of herself which she dearly cherished: the small photograph of a student girl with daring eyes and determined chin, I have felt that she never ceased to prefer these hard, fervent days to all others.

Ah! how harshly the youth of the student passes,
While all around her, with passions ever fresh,
Other youths search eagerly for easy pleasures!
And yet in solitude
She lives, obscure and blessed,
For in her cell she finds the ardor
That makes her heart immense.

But the blessed time is effaced.
She must leave the land of Science
To go out and struggle for her bread
On the grey roads of life.
Often and often then, her weary spirit
Returns beneath the roofs
To the corner ever dear to her heart
Where silent labor swelled
And where a world of memory has rested.

No doubt Marie knew other joys later. But even in her hours of infinite tenderness, even in the hour of triumph and fame, the eternal student was never so content with herself, so proud, as in the poverty and fire of this integral effort. She was proud of her poverty; proud of living alone and independent in a foreign city. Working in the evening beneath the lamp in her poor room she felt that her destiny, still insignificant, mysteriously related itself to the high existences she most admired, and that she became the humble unknown companion of those great scientists of the past, who were, like her, shut into their ill-lighted cells, like her detached from their time, and, like her, spurred their minds to pass beyond the sum of acquired knowledge.

Yes, these four heroic years were, not the happiest of Marie Curie's life, but the most perfect in her eyes, the nearest to those summits of the human mission toward which her gaze had been trained. When one is young and solitary and swallowed up in study, one can "not have enough to live on"—and yet live to the fullest. An immense enthusiasm gave this girl of twenty-six the power to ignore the trials and privations she endured; to magnify her sordid

existence into magic. Later on, love, maternity, the worries of a wife and mother, the complexities of crushingly hard work, were to restore the visionary to real life. But in the enchanted moment when she was poorer than she was ever to be again, she was as reckless as a child. She floated lightly in another world, that which her thought was to regard always as the only pure and true one.

Each day could not be altogether excellent in an adventure like this. There were unforeseen accidents which suddenly upset everything and seemed irremediable: a fatigue impossible to surmount, a short illness requiring care. Still other, and terrifying catastrophes: the one pair of shoes, with leaky soles, gave out finally, and the purchase of new shoes became necessary. This meant a budget upside down for weeks, and the enormous expense had to be made up at all costs, on meals or on petroleum for the lamp.

Or else the winter was longer than usual and the sixth-floor garret was icy. It was so cold that Marie could no longer sleep; she shivered and chattered with it. Her supply of coal was exhausted. . . . But what of that? Could a Polish girl be conquered by a Parisian winter? Marie lighted her lamp again and looked about her. She opened the fat trunk and gathered together all the garments she possessed. She put on all she could, then, having slipped into bed, she piled the rest, her other dress, her linen, on top of the single coverlet. But it was still too cold. Marie stretched out her arm, pulled the one chair over to her, raised it and piled it, too, on top of the amassed garments, giving herself some sort of illusion of weight and heat.

All she had to do now was to wait for sleep, without moving, so as to preserve the scaffolding of which she was the living base. Meanwhile, a layer of ice was slowly forming in the water pitcher.

E. B. W.¹

James Thurber

THREE—no, six years ago (how the time flies!) a gentleman came to the offices of *The New Yorker* and asked for E. B. White. He was shown into the reception room and Mr. White was told that someone was waiting for him there. White's customary practice in those days, if he couldn't place a caller's name, was to slip moodily out of the building by way of the fire escape and hide in the coolness of Schrafft's until the visitor went away. He is not afraid of process servers, blackmailers, borrowers, or cranks; he is afraid

¹From *The Saturday Review of Literature*, October 15, 1938.

of the smiling stranger who tramples the inviolable flowers of your privacy bearing a letter of introduction from an old Phi Gam brother now in the real estate game in Duluth. White knows that the Man in the Reception Room may not be so easy to get rid of as a process server—or even a blackmailer: he may grab great handfuls of your fairest hours, he may even appropriate a sizeable chunk of your life, for no better reason than that he was anchor man on your brother's high school relay team, or married the sister of your old girl, or met an aunt of yours on a West Indies cruise. Most of us, out of a politeness made up of faint curiosity and profound resignation, go out to meet the smiling stranger with a gesture of surrender and a fixed grin, but White has always taken to the fire escape. He has avoided the Man in the Reception Room as he has avoided the interviewer, the photographer, the microphone, the rostrum, the literary tea, and the Stork Club. His life is his own. He is the only writer of prominence I know of who could walk through the Algonquin lobby or between the tables at Jack and Charlie's and be recognized only by his friends.

But to get back to the particular caller of six years ago whom we left waiting in the reception room. On that occasion, out of some obscure compulsion, White decided to go out and confront the man and see what he wanted. "I'm White," he told the stranger he found sitting alone in the room. The man rose, stared for a long moment at the audacious fellow in front of him, and then said, with grim certainty, "You are not E. B. White." White admits that his hair leaped up but it is my fond contention that his heart did, too. I like to think that he was a little disappointed when he realized, as he was bound to, that the man was wrong. I like to insist that he resumed his burden of identity with a small sigh. (Where the remarkable interview got to from the tense point to which I have brought it here I shall leave it to my memoirs to tell.)

In the early days of *The New Yorker* the object of this searching examination signed his first few stories and poems with his full name: Elwyn (as God is my judge) Brooks White. I cannot imagine what spark of abandon, what youthful spirit of devil-may-care prompted a poet who loves to live half-hidden from the eye to come out thus boldly into the open. He didn't keep it up long; he couldn't stand the fierce glare of polysyllabic self-acknowledgment. For the past twelve years he has signed his casuals and his verses merely with his initials, E. B. W. To his friends he is Andy. It was a lucky break that saved him from Elly or Wynn or whatever one might make out of Elwyn in the diminutive. He went to Cornell and it seems that every White who goes there is nicknamed Andy for the simple if rather faraway reason that the first president of the University was named Andrew White.

It used to be (indeed I believe it still is) a wonder and a worry to White's

boss, Mr. Harold Ross, the mystic and wonderful editor of *The New Yorker*, that his favorite and most invaluable assistant avoided people, lived along the untrodden ways, hid by mossy stones, and behaved generally in what Ross was pleased to call an anti-social manner. For a restlessly gregarious man who consorts with ten thousand people from Groucho Marx to Lord Dalhousie it is difficult to comprehend the spirit of Walden Pond. As long ago as the late nineteen twenties there were hundreds of people who implored Ross to introduce them to the man who wrote, on the already famous first page of *The New Yorker*, those silver and crystal sentences which have a ring like the ring of nobody else's sentences in the world. White declined to be taken to literary parties, or to any other kind of parties, but one day Ross lured him to the house of a certain literary lady who, White was persuaded to believe, would be found alone. When the door of her house was opened to them, Ross pushed White into a hallway loud with the chatter of voices proceeding from a crowded living room, the unmistakably assertive voices of writers and artists. Ross made the serious mistake of entering the living room first. When he looked around for White, that shy young man had quietly disappeared. He had proceeded deviously through the house, to the disciplined dismay of the servants, out the back door, and over trees and fences, or whatever else may have been in his way, to the freedom he so greatly cherishes, leaving the curtsy, the compliment, and the booksy chat to writers who go in for that sort of thing.

"Isn't there," Ross demanded of him one time, "anybody you would like to meet?" White gave this difficult question his grave consideration and said, at what Alexander Woollcott would call long last, "Yes. Willie Stevens and Helen Hayes." It is a proof of the reckless zeal and the devoted energy of Harold Ross that he instantly set about trying to get hold of Willie Stevens for the purpose of inviting him to a dinner in New York at which White and Miss Hayes were to be the only other guests. I am desolated to report that this little coming together could not be accomplished: Willie apparently knew too many people the way it was and declined the invitation with that gentle old world courtesy of which he was so consummate a master. Ross did manage finally to bring White face to face with Helen Hayes. Our hero, I am informed, was discontented and tongue-tied during their brief, jumpy conversation and was glad when it was all over. I suppose Miss Hayes was, too.

E. B. W. was born in Mount Vernon, N. Y., and will be forty next year. He had an ordinary, normal childhood, monkeying with an old Oliver typewriter, shooting with an air gun at the weathervane on his father's barn. At Cornell he charmed and astonished his English professors with a prose style so far above Cayuga's ordinary run of literary talent as to be considered something of a miracle. The *Cornell Sun* under White's editorship must have been

the best written college newspaper in the country. After Cornell he drove a model T Ford across the country with a friend named Howard Cushman. When they ran out of money, they played for their supper—and their gasoline—on a fascinating musical instrument that White had made out of some pieces of wire and an old shoe or something. In Seattle the young explorer got a job as reporter on the *Times*, the kind of newspaper that did not allow you to use the verb “to mangle.” Accurately reporting, one day, the anguished cry of a poor husband who found the body of his wife in the municipal morgue, White wrote “My God, it’s her!” and when the city editor changed this to “My God, it is she!” our wanderer moved sadly on to where they had a better understanding of people and a proper feeling for the finer usages of the English tongue. He became mess boy on a ship bound for Alaska, commanded by an old whaling captain, and manned by a crew who knew that a man says it’s her when he finds her dead.

Shortly after *The New Yorker* was founded, its editors began to get occasionally manuscripts from an unknown young man named E. B. White who was a production assistant in an advertising agency. Harold Ross and Katharine Angell, his literary editor, were not slow to perceive that here were the perfect eye and ear, the authentic voice and accent for their struggling magazine. It took months, however, to trap the elusive writer into a conference and weeks to persuade him to come to work in the office; he finally agreed to give them his Thursdays. It is not too much to say that Andy White was the most valuable person on the magazine. His delicate tinkering with the works of *The New Yorker* caused it to move with a new ease and grace. His tag lines for those little newsbreaks which the magazine uses at the bottom of columns were soon being read joyfully aloud around town. His contributions to the Talk of the Town, particularly his Notes and Comment on the first page, struck the shining note that Ross had dreamed of striking. He has written a great many of the memorable picture captions, including the famous one that has passed (usually misquoted) into song and legend, editorial and, I daresay, sermon: “I say it’s spinach and I say the hell with it.” He had a hand in everything: he even painted a cover and wrote a few advertisements. One day nine years ago he decided that some pencil drawings I had absently made and thrown on the floor should be published in *The New Yorker*, so he picked them up, inked in the lines, and, to the surprise of us all, including Ross, got them published in *The New Yorker*.

Andy White understands begonias and children, canaries and goldfish, dachshunds and Scottish terriers, men and motives. His ear not only notes the louder cosmic rhythms but catches the faintest ticking sounds. He plays a fair ping pong, a good piano, and a terrible poker (once, holding four natural

jacks, he dropped out of the betting under the delusion that there were eight jacks in the deck and all he had was half of them.) He has steadfastly refused to learn to play bridge or to take out life insurance. Once he offered an airplane pilot a thousand dollars to take him through a stormy dawn from Roosevelt Field to Chicago because a mysterious phone call had made him believe a friend was in great distress. The pilot had to make a forced landing in Pittsburgh, so that all White had to pay to see for himself that all was quiet along Lake Michigan was eight hundred dollars and his railroad fare from Pittsburgh. When a band of desperadoes stole his Buick sedan out of a quiet Turtle Bay garage and used it in the robbery of an upstate bank, White was suspected by the New York police of being the "brain guy" who devised the operations of a large and dangerous mob. For days detectives shrewdly infested his office, peering under tables, asking questions, staring in suspicious bewilderment at the preposterous array of scrawls, dentist's dates, symbols, phone numbers, photographs, and maps that littered his walls. Eventually they went shrewdly away but every time I hear the sirens scream, I think they are coming for White. The former suspect is a good man with ax, rifle, and canoe (for several years he was part owner of a boys' camp in darkest Canada), and he sails a thirty-foot boat expertly. Two of his favorite books are Van Zanten's "Happy Days" and Alain-Fournier's "The Wanderer." In the country he is afflicted with hay fever and in the city with a dizziness that resembles ordinary dizziness only as the mist resembles the rain. He expects every day of his life that something will kill him: a bit of mould, a small bug, a piece of huckleberry pie.

Some years ago White bought a farm in Maine and he now lives there the year around with his wife, who was Katharine Angell, and their son. He spends most of his time delousing turkeys, gathering bantam eggs, building mice-proof closets, and ripping out old fireplaces and putting in new ones. There is in him not a little of the spirit of Thoreau who believed "that the world crowds round the individual, leaving him no vista, and shuts out the beauty of the earth; and that the wholesome wants of man are few." Now and then, between sunup and milking time, Andy White manages to write a casual or a poem for *The New Yorker*, and he does a monthly department for *Harper's Magazine*. Many of the things he writes seem to me as lovely as a tree—say a maple after the first frost, or the cherry hung with snow. What he will go on to do in his forties and fifties I have no idea. If he simply continues to do what he has always done, it will be all right with me.

'MAGGIE' BRYAN¹

Donald Moffat

I

MAGNUS BRYAN was a nervous teacher at the boarding school I went to as a boy. I call him nervous not because he had a timid drop of blood in his body, but because he twitched; and he twitched because twitching was clearly the only possible outlet for his overwhelming store of energy. One of his tricks, while waiting impatiently for a slow mind to work, was to brush an invisible bit of fluff from his left shoulder with a flash of his hand and a jerk of his head. He was small and lean, with a long leathery face and a thin red nose that he used to seize in moments of despair, and a long red upper lip that snapped up and down over his words like strong elastic. His clear blue eyes were blue as a winter sky and bright as a lens, and pointed at their objective like the round muzzles of converging rifles.

He was a fine man, in many ways a great man—a quick little terrier-like great man; and the finest teacher I ever knew. Though he regarded boys as his natural enemies, and carried himself with an air of expecting good from none of us, he somehow contrived to mix with his wary disillusionment a consistent demand for perfection. He would consent to nothing less. (No wonder he twitched!) He had an ironic humor that was as much a part of him as the nose on his face; a sarcastic tongue that he used very sparingly (the threat of it was enough); and he simply couldn't be fooled: he knew all the answers. He was infallible, objective, experienced, and utterly impartial. He would have held a low opinion of Mr. Chips: I don't believe it ever occurred to him to give a damn whether we liked him or not. If he wanted our respect (and of course he had it) it was solely as a means to the end of more effective teaching. He taught with passion, as if every minute in the hour were precious. He wore himself out teaching, quite literally wore himself out: he was still in his thirties when he died, victim of his own energetic quest for perfection.

II

To wake up his classes Maggie used a devilish scheme of his own invention. He'd stride into the classroom (German, say) at his usual rapid walk, slam his books on the desk, fire a round from his blue eyes for perfect silence, and haul out of his coat pocket his pack of white filing cards, each inscribed

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with a boy's name. For a moment he'd stand there facing us, grimly shuffling the cards; then:—

'Prepositions governing the dative!' he'd snap out of his rat-trap mouth, and turn the top card: 'Brown!'

Uneasy silence, focused on the miserable Brown, who seemed to fade in his chair, like a light going out. A couple of the bright lads would be brandishing their arms. Maggie's time limit was five seconds. He turned another card: 'Willets!'

'Er—' (Maggie reached frantically for his nose, gave it a desperate tug, then slapped down another card like a pitch-player in a railway smoker.)

'Hagen!'

'*Aus—ausser—er—*'

'I have told you before, Hagen, and I now tell you again: there is no preposition *er* in the German language. Crowell!'

'*Durch—für—gegen—ohne—um—wider!*' gasped Crowell—a splendid tackle and first-baseman—and fell back in his seat, spent, to realize at once that he had confused the dative and accusative prepositions. Maggie gave a kind of low growl. His face darkened. He turned another card with a weary air.

'Mitchell.'

'*Aus—ausser—bei—mit—nach—seit—von—zu.*' Mitchell's soft and infallible voice always came as a relief. We relaxed for a moment.

So it went. The inquisition usually lasted about ten minutes. Maggie marked each card with a check or circle and totted them up every week. He was a stiff marker. Nobody ever got a perfect grade from Maggie, though there were those who broke their hearts trying. Himself a perfectionist, he believed perfection to be unattainable, the effort more important than the goal. The 'go at the cards,' as he called it, had the virtue not only of nailing down our attention for fifty minutes, but also of teaching us the stuff for keeps. By the end of the period every boy was empty, exhausted by concentration; and Maggie himself—his voice rising progressively from a bark to a thin rasp of pain—was a wreck. We could relax on the soft bosom of the gentlemanly English teacher who followed Maggie's German. Maggie had it all to do over again with his senior American History class. He got results: his students learned the history of their country; and I think I can truthfully say that no member of his course ever flunked his college entrance. By some strange divagation of our native educational system I had had no American history whatever from the age of ten until, at seventeen, I took Maggie's course—and there learned for the first time and with a vague feeling of disappointment that the dimly remembered Nebraska Bill was not in fact a glamorous early rival of Buffalo Bill but an Act of Congress.

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III

A small boy in his first year at boarding school can be one of the unhappiest mortals on earth. Homesickness is only part of his misery, and in any case is normally soon done with. No, it's the New England cold: the bleak New England eye, the flat New England voice, the celebrated New England conscience, just, implacable, unemotional—or rather perhaps fearful of emotion, longing the while to give expression to a genuine inner warmth but helpless under the discipline of a habit generations old. Steaming radiators are no substitute for the kind of warmth a new little boy needs, or thinks he needs. The warmth is there, of course, but safely hidden: he must earn the right to it. If he can learn to keep his mouth shut, his opinions to himself, his idiosyncrasies buttoned under his jacket; if he can play the part of communal enthusiast without original ideas, tastes, or emotions; and, embracing these and other afflictions, if he can learn to submit unflinchingly to the impersonal discipline of conformity—then, at the first year's end, he may find that he has won an emotional balance that couldn't well be gained in any other manner, and be the better for it. But woe to the stubborn individualist! Colder than the January winds that whistle through the bleak red school buildings is the wind of lonely indifference that pierces and chills his unhappy little soul!

I must have been an extraordinarily fresh kid, probably spoiled by the soft comfort of a warm and affectionate childhood, as well as by earlier attendance at a little-boy school in which I and my gang had ruled the roost. Boarding school came, of all possible forms of shock, doubtless as the most necessary for my airy, flip complacency. An elder brother had done his best to warn me. For a fortnight I managed to keep my mouth shut and wear the new-boy habit with becoming meekness. Then I began to feel at home. It was much, much too soon. I found that a wag at home is not so waggish at school. I discovered the folly of talking back to a sadistic little classmate who had attained the social seniority of a previous year of school. Older boys and masters took to snubbing me with enthusiasm; and my own class-mates—my equals, I supposed—went about with lips in a permanent curl. Foolishly stubborn, I continued to walk the perilous ways of pride; and the evening came when I received a written invitation from the head of my class to present myself behind Abbot Hall after supper.

It was a shock. Yet I suppose it did me good; it must have, for I survived. Even Mr. Willard, my housemaster, apparently thought I needed the discipline, so tactfully did he keep his face turned away.

Ingenious brutality in the dark! They were so many, and they seemed

to enjoy it so heartily! I went down fighting. For a moment, when one of my random swings landed on a nose, I even felt that life was good. After it was over I crept up to my room, bruised, dirty, ashamed, and bawling with rage and ruined pride. Later I took a kind of secret satisfaction in the knowledge that never before had a new boy been so fresh as to require the organized attention of his entire class. And if my years at school were never quite free from the memory of this episode, and I as a result never entirely happy there, I was ready to admit before I graduated that the fault had been mine and not the school's. I had it coming.

That first year was a long and painful struggle to repair the dents in my pride, to carry without showing it the heavy, lonely burden of fancied unpopularity. There was an occurrence (it's funny the little things a boy remembers) that helped me enormously: Mr. Willard called me to his study one day after the term examinations and accused me point-blank of cheating. He said I had sneaked a preview of his algebra examination—and in a way he had good reason to believe it: I was rotten at algebra, yet by sheer luck had turned in an almost perfect paper. Though I think I seldom resented being caught and punished for a crime I had committed, I never did learn to take personal injustice sitting down; and it so happened that one of my little sources of secret pride was that I never cheated. (Every boy must have a private store of self-respect, some kind of hidden reservoir of integrity which he can tap at need. Mine happened to be not cheating.) It wasn't at all like Mr. Willard to fling such random accusations about; I knew it and he knew it; and so I was able to prove my genuine innocence through the simple medium of sheer passion. Mr. Willard ended, in fact, by apologizing.

Afterwards Maggie Bryan found me triumphantly brooding in the musty, oak-paneled Common Room.

'What's the matter with you?' he demanded in his customary truculent bark. I told him.

'Mr. Willard admitted he was wrong, didn't he?' I said he did.

'Then forget it!' And he bustled away, on the run as usual. Excellent advice!

IV

Maggie did me good in more ways than I can possibly tell. Some of them I remember, many more are forgotten. For three years I hated him with a dull grinding hatred; then came my final year, and I woke up on the second morning to the horrid realization that I was to have him in two courses and three sports—that I should, in other words, practically be living in his lap

till I graduated. He taught German and history; he coached hockey, second-team baseball, and helped with football. There must have been some episode, some unusually dramatic or subtle incident, that marked the turning point in our relations. If there was, I've forgotten it. All I know is that I ended the year his wholly devoted slave. At last I knew him, through and through, understood his character, his fairness, his passion for the best. Perhaps, too, he began to know me. God knows I was trying, at last, with all I had in me—and with Maggie the effort was all: success to him was merely a pleasing by-product. I don't know how to reconcile this principle with his perfectionism; but Maggie did.

He rightly never had a high opinion of my intelligence, especially of my athletic intelligence. His own mind worked with the speed of flame; a cow mired in a swamp would be by contrast an appropriate figure for mine. In the spring of my last year I caught on Maggie's second baseball team. As a backstop I had one outstanding virtue: I was the only catcher available, and Maggie knew it. The plain and regrettable fact was that Maggie didn't have the proper temperament for second-team coaching. He deserved the best material. He loved baseball, all baseball, and in particular he loved accurate, 'heads-up' baseball, such as he had enjoyed at college. We gave him, I'm sorry to say, the kind of game in which the centre fielder is the busiest man on the team: the ball had a way of ending up there whenever our opponent got a man on base. Maggie suffered severely, and kept plugging away at us with all the weapons he commanded: derision, cajolery, patience, temper, reason—whichever he thought each case required. I, who could be counted upon to lose my head in the pinch, must have been among the heaviest of his burdens.

Playing at St. Mark's one sunny Saturday in May,—a close game,—I got so excited in one of the late innings that I forgot to put on my mask. Maggie noticed the omission after a couple of pitches and shouted courteously to the St. Mark's coach on the opposite bench, 'Is it all right to remind my catcher to put on his mask?'

'By all means,' laughed the coach.

I remember this not because it was the first time I'd forgotten my mask, but because it was the last.

At Milton, on another day, he used another method. The Milton pitcher, a chubby youth, had a slow roundhouse curve that was poison to my batting technique. (That's what I called it, so help me: my 'batting technique'; it consisted of a blind and terrific wallop at the spot where the ball had last been seen, and it left me, too often, face down on the ground.) When I walked back to the bench after striking out for the third time, shaking my

head in the conventional way, Maggie fixed me with his high-power eye and growled in a quivering voice, too low for the others to hear: 'Moffat, if you strike out your next time up, I'll throw you off the team for good!' His threats were never in vain. I knew he meant it. And his force of character was such that I actually singled to left field, my next turn at bat, and knocked in the winning run. Did Maggie pat me on the back? Not he! He had already stated his terms; I had merely met them. In Maggie's code there were medals only for actions beyond the line of duty.

Only once was I able to surprise us both by this kind of meritorious conduct. We were playing the Groton Seconds. They had men on first and second, the batter laid down a hit-and-run bunt along the third-base line, and I, throwing off my mask, was on it quick enough to catch the batter at first—if I'd cared to. Instead, I deliberately used my head, an experiment Maggie had been urging me to try all spring long. Out of the corner of my eye I had seen the second-base runner rounding third: I picked up the ball, turned and faked the throw to first, and tagged the ambitious Grotty as he ran into my arms. It was the third out. As I walked over to the bench I wore a becomingly dead pan, one ear pricked at Maggie.

'Good play, Moffat,' he grunted. 'How did you think of it?'

'You taught it to me one day in practice, sir,' I smugly replied.

'I did, did I? Good for you!'

It was the first time he had ever mentioned me, so to speak, in dispatches. The praise went to my head: my last time at bat the Grotty pitcher hit one of my horizontal swings fair on the nose, the ball soared high and handsome to pastures green, the centre fielder misjudged it, and—thanks to a subsequent fumble by the third-baseman—I slid safely into third for the only triple I ever made in my life. It goes without saying that the scene is still fresh in my memory and that even today I think of myself as a powerful hitter. The credit is wholly Maggie's.

V

Granted that icy discipline is prone to nip the seed of self-expression, to blight the soft green bud of latent genius, the fact is that the creative gift is rare, and the main wheels, the big wheels that make a school go round, must of necessity be geared to the pedestrian pace of the ungifted average. If talent is real, it will probably survive any kind of treatment except indulgence. The autobiographies of countless great figures of British arts and letters testify with a sort of boastful bitterness to the numbing effect of public-school discipline on their free and tender souls. A point to be argued, however, is

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whether or not their talents would ever have ripened without having undergone the discipline they so hotly resented. May not the violence of their rebellion against tyranny, injustice, and traditional brutality have been the very instrument of their release, the springboard that flung them high into the regions of their subsequent triumphs?

Whether Maggie ever thought consciously along such lines may well be questioned. If he did, he never let on. An expert opportunist, he doubtless trusted rather to his instinctive knowledge of what boys needed 'for the good of their souls.' Tradition, as such, never bothered him in the least; nor did the old school tie ever form a part of his professional wardrobe. He regarded boys as individuals, subject to certain ancient laws of juvenile behavior, but nonetheless to be handled according to their separate colors and shapes. He found something soft in me that needed hardening, and so, with what I took for discriminating brutality, he kept bearing down.

Sympathy! I craved it; he made sure that I didn't get it. Each spring we used to hold an interhouse track meet between teams selected in time trials run off by the older boys. My house boasted as its chief ornament the school god, John Hill—fleet as the cyclone, powerful as a Percheron, captain of everything in school (except perhaps his soul), worshiped by the younger boys, and gratefully trusted by weary masters: character incarnate. There's one in every class in every school. Sometimes they grow up.

Hill, of course, was conducting the time trials for our house. My turn came. I toed the line,—skinny, anxious, clumsy,—crouched in my own version of the sprinter's start, and listened to the thumping of my heart. Hill stood over me, watch in hand, grim of face.

'Ready,' he trumpeted, 'on your mark—get set—go!'

I lurched forward in a shower of gravel and do-or-die, and fell flat on my face. As a reasoning creature I naturally expected to get up and start fresh: it was a time trial, not a race. And there was Hill, leaning over me even before I had time to rise, his voice twisted with passion.

'What are you lying there for? Get up and run, you little yellow dog!'

I got to my feet in honest amazement. 'What the heck!' I piped, brushing off the sand, 'This is a time trial,' and walked back to the starting line.

Hill placed his face close to mine. 'You've had your chance,' he said, and pointed sternly towards the house. 'Now get out!'

I laughed shrilly in his face (none of the other boys joined me; they looked coldly virtuous), and I was still laughing, though with a growing bitterness, when I reached the house and met Maggie Bryan, going somewhere in a hurry.

He took a quick look at me. 'What's the matter with you?' he asked. God knows I was wholly used to this form of greeting from Maggie.

'Gee whiz, sir—' and I told him, surging with injustice.

He listened till I had finished. 'Hill's running the trials,' he remarked, and was off about his business. It was good for me, I suppose, more especially because I knew that he treated the great John Hill exactly as he did the rest of us.

VI

My first year of Maggie was the toughest. There was no doubt in my mind that for him the day was lost on which he couldn't indulge in a round of sadistic recreation at my expense. How I loathed the man! By night I lay in my white iron bed muttering intricate plans for revenge; saw him apologizing to me before the assembled school, a shabby figure of remorse, while I accepted his self-reproaches with a manly nod of forgiveness and the boys crowded round to congratulate me.

By day, however, things went rather differently. Maggie continued to hound me—or so I believed; continued to invent humiliations for my benefit. It happened one evening that he replaced the junior master at study hour (this was not one of Maggie's ordinary duties), and I seized the opportunity to show him what an earnest student I really was. Getting out my Latin, I put on an act for his benefit, part deliberate, part unconscious. Such writhing, such stifled groans and pain-wrung grimaces, such ruffling of the hair and furrowing of the brow, have probably never been witnessed from that school day to this. Maggie sat sideways at his raised desk, quietly reading. Not once did he glance in my direction. Yet presently into the pool of silence dropped, and exploded like a bomb, my name, in Maggie's softest voice—soft at the edges, round a core of cut steel:—

'Moffat.'

'Yes, sir?' I sat violently erect, innocent as a dove—least innocent of birds.

'It isn't really as hard as that, is it?'

'No, sir,' I answered feebly. Maggie turned back to his book, I to my mortification, aware of the snickers rippling round me.

Little things like that!

VII

The incident that formed the kernel round which all my anti-Maggie feeling grew had, however, a more definite shape and substance. I felt, perhaps with reason, that the trap he set for me was unfair; and I save it for the climax of these rambling reminiscences not because of its intrinsic importance, or because of its effect on me, but because its curious sequel was to me so surprising. Even after he had won—as I have said—my deep affec-

tion as well as the whole of my respect, the memory of the thing used to stir and whimper like an uneasy wind in the secret caverns of my soul.

Our main field of battle, that first year, was beginners' German. I got off to a bad start, and as time oozed along I found myself gummed in a sticky mass of nouns, verbs, adverbs, and pronouns, all basted in the thick gravy of that nonsensical backhanded German construction. (I still think of German as a language in which nothing comes out even.) At the term examination I miserably failed. My report—not too bad except in German—went home, and in due course one of my mother's weekly letters contained a 'How come?' clause. I replied at some length, laying my cards frankly on the table and basing my defense on the broad premise that (1) German is an abominable language and (2) trying to learn it a waste of valuable time. Nevertheless, I continued, I work at it hard and faithfully; it is obvious therefore that (3) my failure isn't really my fault at all, but due to causes beyond my control: i.e. Mr. Bryan. Mr. Bryan is notoriously unfair in general—all the guys say so—and down on me in particular. However, I concluded, I will continue to do my best in spite of all handicaps, because, as you know, Mother, that is my nature—or suggestive hints to that effect. I ended on a strong don't-blame-*me* note. Mine was the plea of a manly victim of calculated injustice. I haven't a doubt that I sincerely believed everything I said—or did after I'd written it, anyway. That's one trouble with writing things down.

The winter term ran on in the sluggish, sinister way of winter terms, and in spite of what I chose to call my best efforts the tongue of Goethe continued to elude me. Then one evening Maggie told me to come to his room after study hour: he wanted to have a talk with me. That, and nothing more.

At the appointed hour I shivered across the black arctic campus and climbed the stairs to his office and knocked on the door.

'Come in!' . . .

'Sit down, Moffat.' Maggie's study was in darkness except for the powerful green-shaded reading lamp that stood on his desk. It was a bare little room, the working retreat of a busy man impatient of all but professional necessities. It contained, besides the desk, Maggie's own swivel chair, a table with a few magazines in neat piles, a shelf of books along one wall, and a Morris chair of yellow oak, upholstered in brown corduroy. There was one curtained window, and a door leading to the inner bedroom. I perched on the edge of the easy-chair, he sat at his desk and turned the lamp so that it shone full in my face. He was a voice from the darkness, a piercing eye, and a shadowy beak of nose.

For a moment he gazed at me, blinking in my chair. Then:—

'Moffat,' he said quietly, in a let's-get-down-to-business tone of voice, 'why can't you do better in German?'

'I—I—don't know, sir. I do my best, really I do, sir.' My voice sounded very small and thin, even to me.

'You're not stupid.' It was a statement, not a question. I remained silent. 'And yet your work is consistently abominable,' he continued, with a jab at his left shoulder, a jerk of the head.

'I—I work harder at German than everything else put together—honestly I do, sir,' I replied hopefully.

'I thought I knew something about teaching German,' he continued, half to himself, 'but you've got me beaten. There must be *some* explanation. . . . Do you think my methods are wrong?'

'Oh *no*, sir, not at *all*, sir!' In my anxious voice rang the conviction that, of all teachers since the world began, Mr. Bryan was the first and finest. The lamp was beginning to hurt my eyes; I felt mesmerized by a Voice, issuing from blazing light.

'Then it isn't that.' He turned away, humming thoughtfully to himself, leaning back in his swivel chair and rocking a little as he picked up a pipe and slowly filled and lit it. Then he swung round and faced me again, and his voice took on an unusual gentleness.

'You think I'm fair?' he remarked casually, as if determined not to leave even the ultimate absurdity unplumbed. 'You don't think I'm harder on you than on the others? It isn't that, is it?' (Oh, sucking dove; oh, milking tiger!)

'Oh *no*, sir, of *course* not, sir!'

He pounced: slam went his chair as he leaned forward, one arm pointed at my head, and the letter in the outstretched hand terribly visible in the beam of light. 'Then why did you write to your mother that I was down on you?'

Nemesis! Doom appalling! A roaring blackness shot with stabbing flame! (Of course I'd forgotten all about that letter weeks before.) What happened next, what I said, how and when I got out of that evil room—I remember nothing whatever about it. When I came to, I was halfway home, gripped in an agony of shame and a dull rage directed equally at Maggie and my mother—Maggie for trapping me under that light, my mother for an act of criminal naïveté in passing my excuse on to the Headmaster. That night I lay long awake, plotting futile revenge on Maggie and composing a dignified yet piteous rebuke to my mother.

Maggie never referred to the episode again, by look or word. I had learned

my lesson and he knew it. And from that time on my German improved. I don't know why. Yet, despite our subsequent friendship, many years passed before I could think of Maggie except in terms of a bright light, an accusing eye, and a piece of white paper.

It is the sequel, however, that lifts the incident out of the commonplace—the astonishing sequel that waited eight years to be revealed. One evening during my senior year at college, Maggie dropped into my room in Holworthy for a smoke—as he did now and then—and we chatted for an hour or so before he got up to go. He was driving back to school. He was twitching more than usual. The bit of fluff on his left shoulder seemed harder than ever to brush away. I thought he looked tired and not too well, and had told him so. He shrugged, smiling, and murmured something about its being a tough life. It was not till then, not till we had shaken hands at the door, standing together in the semidarkness and laughing in close community of spirit, that I suddenly and without premeditation plucked memory from its hiding place and showed it to him. Even then it came out hard; I felt, even then, that this phantom shape, to me so long familiar, might turn into a thing of horror under the light. And I knew as I spoke that what I really feared was the thought of shaming him with it. Of course he'd remember; of course he'd feel ashamed—as I, secretly, still was for his sake.

'Maggie,' I said, trying to keep my voice casual, 'do you remember the time, my first year at school, when you hauled me up to your study and confronted me with that letter from my mother?' I watched his face with my whole soul—and learned the truth.

Maggie didn't remember! He obviously had no idea what I was talking about. He repeated, in a puzzled tone: 'Letter? What letter? From your mother?'

I told him the story.

'Do you mean to tell me,' he said after a long pause, in a low voice and very slowly, 'do you mean to tell me you've remembered it all these years?'

'I sure do!'

'Strange,' he mused. 'I haven't the faintest recollection of it myself. . . . Strange what boys remember.' Then he gave me his quick smile and held out his hand. 'Damn dirty trick, wasn't it? Do you mind if I say I'm sorry now? Good night!'

'Good night,' I called after him down the stairs.

The ghost was laid. I felt a great release. 'Strange what a boy remembers!' True enough! Maggie himself has a pretty good kind of immortality in the memory of every boy he ever taught.

College

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SCIENCE AND CULTURE¹

Thomas Henry Huxley

I HOLD very strongly by two convictions—The first is, that neither the discipline nor the subject-matter of classical education is of such direct value to the student of physical science as to justify the expenditure of valuable time upon either; and the second is, that for the purpose of attaining real culture, an exclusively scientific education is at least as effectual as an exclusively literary education.

I need hardly point out to you that these opinions, especially the latter, are diametrically opposed to those of the great majority of educated Englishmen, influenced as they are by school and university traditions. In their belief, culture is obtainable only by a liberal education; and a liberal education is synonymous, not merely with education and instruction in literature, but in one particular form of literature, namely, that of Greek and Roman antiquity. They hold that the man who has learned Latin and Greek, however little, is educated; while he who is versed in other branches of knowledge, however deeply, is a more or less respectable specialist, not admissible into the cultured caste. The stamp of the educated man, the University degree, is not for him.

I am too well acquainted with the generous catholicity of spirit, the true sympathy with scientific thought, which pervades the writings of our chief apostle of culture to identify him with these opinions; and yet one may cull from one and another of those epistles to the Philistines, which so much delight all who do not answer to that name, sentences which lend them some support.

Mr. Arnold tells us that the meaning of culture is "to know the best that has been thought and said in the world." It is the criticism of life contained in literature. That criticism regards

Europe as being, for intellectual and spiritual purposes, one great confederation, bound to a joint action and working to a common result; and whose members have, for their common outfit, a knowledge of Greek, Roman, and Eastern antiquity, and of one another. Special, local, and temporary advantages being put out of account, that modern nation will in the intellectual and spiritual sphere make most progress, which most thoroughly carries out this programme. And what is that but saying that we too, all of us, as individuals, the more thoroughly we carry it out, shall make the more progress?²

¹From an address delivered at the opening of Sir Josiah Mason's Science College at Birmingham, October 1, 1880.

²*Essays in Criticism*, p. 37.

We have here to deal with two distinct propositions. The first, that a criticism of life is the essence of culture; the second, that literature contains the materials which suffice for the construction of such criticism.

I think that we must all assent to the first proposition. For culture certainly means something quite different from learning or technical skill. It implies the possession of an ideal, and the habit of critically estimating the value of things by comparison with a theoretic standard. Perfect culture should supply a complete theory of life, based upon a clear knowledge alike of its possibilities and of its limitations.

But we may agree to all this, and yet strongly dissent from the assumption that literature alone is competent to supply this knowledge. After having learnt all that Greek, Roman, and Eastern antiquity have thought and said, and all that modern literature has to tell us, it is not self-evident that we have laid a sufficiently broad and deep foundation for that criticism of life, which constitutes culture.

Indeed, to any one acquainted with the scope of physical science, it is not at all evident. Considering progress only in the "intellectual and spiritual sphere," I find myself wholly unable to admit that either nations or individuals will really advance, if their common outfit draws nothing from the stores of physical science. I should say that an army, without weapons of precision and with no particular base of operations, might more hopefully enter upon a campaign on the Rhine, than a man, devoid of a knowledge of what physical science has done in the last century, upon a criticism of life.

When a biologist meets with an anomaly, he instinctively turns to the study of development to clear it up. The rationale of contradictory opinions may with equal confidence be sought in history.

It is, happily, no new thing that Englishmen should employ their wealth in building and endowing institutions for educational purposes. But, five or six hundred years ago, deeds of foundation expressed or implied conditions as nearly as possible contrary to those which have been thought expedient by Sir Josiah Mason. That is to say, physical science was practically ignored, while a certain literary training was enjoined as a means to the acquirement of knowledge which was essentially theological.

The reason of this singular contradiction between the actions of men alike animated by a strong and disinterested desire to promote the welfare of their fellows, is easily discovered.

At that time, in fact, if any one desired knowledge beyond such as could be obtained by his own observation, or by common conversation, his first necessity was to learn the Latin language, inasmuch as all the higher knowl-

edge of the western world was contained in works written in that language. Hence, Latin grammar, with logic and rhetoric, studied through Latin, were the fundamentals of education. With respect to the substance of the knowledge imparted through this channel, the Jewish and Christian Scriptures, as interpreted and supplemented by the Romish Church, were held to contain a complete and infallibly true body of information.

Theological dicta were, to the thinkers of those days, that which the axioms and definitions of Euclid are to the geometers of these. The business of the philosophers of the middle ages was to deduce from the data furnished by the theologians, conclusions in accordance with ecclesiastical decrees. They were allowed the high privilege of showing, by logical process, how and why that which the Church said was true, must be true. And if their demonstrations fell short of or exceeded this limit, the Church was maternally ready to check their aberrations; if need were by the help of the secular arm.

Between the two, our ancestors were furnished with a compact and complete criticism of life. They were told how the world began and how it would end; they learned that all material existence was but a base and insignificant blot upon the fair face of the spiritual world, and that nature was, to all intents and purposes, the play-ground of the devil; they learned that the earth is the centre of the visible universe, and that man is the cynosure of things terrestrial, and more especially was it inculcated that the course of nature had no fixed order, but that it could be, and constantly was, altered by the agency of innumerable spiritual beings, good and bad, according as they were moved by the deeds and prayers of men. The sum and substance of the whole doctrine was to produce the conviction that the only thing really worth knowing in this world was how to secure that place in a better which, under certain conditions, the Church promised.

Our ancestors had a living belief in this theory of life, and acted upon it in their dealings with education, as in all other matters. Culture meant saintliness—after the fashion of the saints of those days; the education that led to it was, of necessity, theological; and the way to theology lay through Latin.

That the study of nature—further than was requisite for the satisfaction of everyday wants—should have any bearing on human life was far from the thoughts of men thus trained. Indeed, as nature had been cursed for man's sake, it was an obvious conclusion that those who meddled with nature were likely to come into pretty close contact with Satan. And, if any born scientific investigator followed his instincts, he might safely reckon upon earning the reputation, and probably upon suffering the fate, of a sorcerer.

Had the western world been left to itself in Chinese isolation, there is no saying how long this state of things might have endured. But, happily, it

was not left to itself. Even earlier than the thirteenth century, the development of Moorish civilisation in Spain and the great movement of the Crusades had introduced the leaven which, from that day to this, has never ceased to work. At first, through the intermediation of Arabic translations, afterwards by the study of the originals, the western nations of Europe became acquainted with the writings of the ancient philosophers and poets, and, in time, with the whole of the vast literature of antiquity.

Whatever there was of high intellectual aspiration or dominant capacity in Italy, France, Germany, and England, spent itself for centuries in taking possession of the rich inheritance left by the dead civilisations of Greece and Rome. Marvellously aided by the invention of printing, classical learning spread and flourished. Those who possessed it prided themselves on having attained the highest culture then within the reach of mankind.

And justly. For, saving Dante on his solitary pinnacle, there was no figure in modern literature at the time of the Renaissance to compare with the men of the antiquity; there was no art to compete with their sculpture; there was no physical science but that which Greece had created. Above all, there was no other example of perfect intellectual freedom—of the unhesitating acceptance of reason as the sole guide to truth and the supreme arbiter of conduct.

The new learning necessarily soon exerted a profound influence upon education. The language of the monks and schoolmen seemed little better than gibberish to scholars fresh from Virgil and Cicero, and the study of Latin was placed upon a new foundation. Moreover, Latin itself ceased to afford the sole key to knowledge. The student who sought the highest thought of antiquity, found only a secondhand reflection of it in Roman literature, and turned his face to the full light of the Greeks. And after a battle, not altogether dissimilar to that which is at present being fought over the teaching of physical science, the study of Greek was recognised as an essential element of all higher education.

Then the Humanists, as they were called, won the day; and the great reform which they effected was of incalculable service to mankind. But the Nemesis of all reformers is finality; and the reformers of education, like those of religion, fell into the profound, however common, error of mistaking the beginning for the end of the work of reformation.

The representatives of the Humanists, in the nineteenth century, take their stand upon classical education as the sole avenue to culture, as firmly as if we were still in the age of Renaissance. Yet, surely, the present intellectual relations of the modern and the ancient worlds are profoundly different from those which obtained three centuries ago. Leaving aside the existence of a great and characteristically modern literature, of modern painting, and,

especially, of modern music, there is one feature of the present state of the civilised world which separates it more widely from the Renaissance, than the Renaissance was separated from the middle ages.

This distinctive character of our own times lies in the vast and constantly increasing part which is played by natural knowledge. Not only is our daily life shaped by it; not only does the prosperity of millions of men depend upon it, but our whole theory of life has long been influenced, consciously or unconsciously, by the general conceptions of the universe, which have been forced upon us by physical science.

In fact, the most elementary acquaintance with the results of scientific investigation shows us that they offer a broad and striking contradiction to the opinion so implicitly credited and taught in the middle ages.

The notions of the beginning and the end of the world entertained by our forefathers are no longer credible. It is very certain that the earth is not the chief body in the material universe, and that the world is not subordinated to man's use. It is even more certain that nature is the expression of a definite order with which nothing interferes, and that the chief business of mankind is to learn that order and govern themselves accordingly. Moreover this scientific "criticism of life" presents itself to us with different credentials from any other. It appeals not to authority, nor to what anybody may have thought or said, but to nature. It admits that all our interpretations of natural facts are more or less imperfect and symbolic, and bids the learner seek for truth not among words but among things. It warns us that the assertion which outstrips evidence is not only a blunder but a crime.

The purely classical education advocated by the representatives of the Humanists in our day, gives no inkling of all this. A man may be a better scholar than Erasmus, and know no more of the chief causes of the present intellectual fermentation than Erasmus did. Scholarly and pious persons, worthy of all respect, favour us with allocutions upon the sadness of the antagonism of science to their mediaeval way of thinking, which betray an ignorance of the first principles of scientific investigation, an incapacity for understanding what a man of science means by veracity, and an unconsciousness of the weight of established scientific truths, which is almost comical.

There is no great force in the *tu quoque* argument, or else the advocates of scientific education might fairly enough retort upon the modern Humanists that they may be learned specialists, but that they possess no such sound foundation for a criticism of life as deserves the name of culture. And, indeed, if we were disposed to be cruel, we might urge that the Humanists have brought this reproach upon themselves, not because they are too full of the spirit of the ancient Greek, but because they lack it.

The period of the Renaissance is commonly called that of the "Revival of Letters," as if the influences then brought to bear upon the mind of Western Europe had been wholly exhausted in the field of literature. I think it is very commonly forgotten that the revival of science, effected by the same agency, although less conspicuous, was not less momentous.

In fact, the few and scattered students of nature of that day picked up the clue to her secrets exactly as it fell from the hands of the Greeks a thousand years before. The foundations of mathematics were so well laid by them, that our children learn their geometry from a book written for the schools of Alexandria two thousand years ago. Modern astronomy is the natural continuation and development of the work of Hipparchus and of Ptolemy; modern physics of that of Democritus and of Archimedes; it was long before modern biological science outgrew the knowledge bequeathed us by Aristotle, by Theophrastus, and by Galen.

We cannot know all the best thoughts and sayings of the Greeks unless we know what they thought about natural phenomena. We cannot fully apprehend their criticism of life unless we understand the extent to which that criticism was affected by scientific conceptions. We falsely pretend to be the inheritors of their culture, unless we are penetrated, as the best minds among them were, with an unhesitating faith that the free employment of reason, in accordance with scientific method, is the sole method of reaching truth.

Thus I venture to think that the pretensions of our modern Humanists to the possession of the monopoly of culture and to the exclusive inheritance of the spirit of antiquity must be abated, if not abandoned. But I should be very sorry that anything I have said should be taken to imply a desire on my part to depreciate the value of classical education, as it might be and as it sometimes is. The native capacities of mankind vary no less than their opportunities; and while culture is one, the road by which one man may best reach it is widely different from that which is most advantageous to another. Again, while scientific education is yet inchoate and tentative, classical education is thoroughly well organised upon the practical experience of generations of teachers. So that, given ample time for learning and estimation for ordinary life, or for a literary career, I do not think that a young Englishman in search of culture can do better than follow the course usually marked out for him, supplementing its deficiencies by his own efforts.

But for those who mean to make science their serious occupation; or who intend to follow the profession of medicine; or who have to enter early upon the business of life; for all these, in my opinion, classical education is a mistake; and it is for this reason that I am glad to see "mere literary educa-

tion and instruction" shut out from the curriculum of Sir Josiah Mason's College, seeing that its inclusion would probably lead to the introduction of the ordinary smattering of Latin and Greek.

Nevertheless, I am the last person to question the importance of genuine literary education, or to suppose that intellectual culture can be complete without it. An exclusively scientific training will bring about a mental twist as surely as an exclusively literary training. The value of the cargo does not compensate for a ship's being out of trim; and I should be very sorry to think that the Scientific College would turn out none but lopsided men.

There is no need, however, that such a catastrophe should happen. Instruction in English, French, and German is provided, and thus the three greatest literatures of the modern world are made accessible to the student.

French and German, and especially the latter language, are absolutely indispensable to those who desire full knowledge in any department of science. But even supposing that the knowledge of these languages acquired is not more than sufficient for purely scientific purposes, every Englishman has, in his native tongue, an almost perfect instrument of literary expression; and, in his own literature, models of every kind of literary excellence. If an Englishman cannot get literary culture out of his Bible, his Shakespeare, his Milton, neither, in my belief, will the profoundest study of Homer and Sophocles, Virgil and Horace, give it to him.

Thus, since the constitution of the College makes sufficient provision for literary as well as for scientific education, and since artistic instruction is also contemplated, it seems to me that a fairly complete culture is offered to all who are willing to take advantage of it.

But I am not sure that at this point the "practical" man, scotched but not slain, may ask what all this talk about culture has to do with an Institution, the object of which is defined to be "to promote the prosperity of the manufactures and the industry of the country." He may suggest that what is wanted for this end is not culture, nor even a purely scientific discipline, but simply a knowledge of applied science.

I often wish that this phrase, "applied science," had never been invented. For it suggests that there is a sort of scientific knowledge of direct practical use, which can be studied apart from another sort of scientific knowledge, which is of no practical utility, and which is termed "pure science." But there is no more complete fallacy than this. What people call applied science is nothing but the application of pure science to particular classes of problems. It consists of deductions from those general principles, established by reasoning and observation, which constitute pure science. No one can safely make these deductions until he has a firm grasp of the principles; and he can obtain

that grasp only by personal experience of the operations of observation and of reasoning on which they are founded.

Almost all the processes employed in the arts and manufactures fall within the range either of physics or of chemistry. In order to improve them, one must thoroughly understand them; and no one has a chance of really understanding them, unless he has obtained that mastery of principles and habit of dealing with facts, which is given by long-continued and well-directed purely scientific training in the physical and the chemical laboratory. So that there really is no question as to the necessity of purely scientific discipline, even if the work of the College were limited by the narrowest interpretation of its stated aims.

And, as to the desirableness of a wider culture than that yielded by science alone, it is to be recollected that the improvement of manufacturing processes is only one of the conditions which contribute to the prosperity of industry. Industry is a means and not an end; and mankind work only to get something which they want. What that something is depends partly on their innate, and partly on their acquired, desires.

If the wealth resulting from prosperous industry is to be spent upon the gratification of unworthy desires, if the increasing perfection of manufacturing processes is to be accompanied by an increasing debasement of those who carry them on, I do not see the good of industry and prosperity.

Now it is perfectly true that men's views of what is desirable depend upon their characters; and that the innate proclivities to which we give that name are not touched by any amount of instruction. But it does not follow that even mere intellectual education may not, to an indefinite extent, modify the practical manifestation of the characters of men in their actions, by supplying them with motives unknown to the ignorant. A pleasure-loving character will have pleasure of some sort; but, if you give him the choice, he may prefer pleasures which do not degrade him to those which do. And this choice is offered to every man, who possesses in literary or artistic culture a never-failing source of pleasures, which are neither withered by age, nor staled by custom, nor embittered in the recollection by the pangs of self-reproach.

I confess, I should like to see one addition made to the excellent scheme of education propounded for the College, in the shape of provision for the teaching of Sociology. For though we are all agreed that party politics are to have no place in the instruction of the College; yet in this country, practically governed as it is now by universal suffrage, every man who does his duty must exercise political functions. And, if the evils which are inseparable from the good of political liberty are to be checked, if the perpetual

oscillation of nations between anarchy and despotism is to be replaced by the steady march of self-restraining freedom; it will be because men will gradually bring themselves to deal with political, as they now deal with scientific questions; to be as ashamed of undue haste and partisan prejudice in the one case as in the other; and to believe that the machinery of society is at least as delicate as that of a spinning-jenny, and as little likely to be improved by the meddling of those who have not taken the trouble to master the principles of its action.

KNOWLEDGE VIEWED IN RELATION TO PROFESSIONAL SKILL¹

John Henry Newman

1

I HAVE been insisting, in my two preceding Discourses, first, on the cultivation of the intellect, as an end which may reasonably be pursued for its own sake; and next, on the nature of that cultivation, or what that cultivation consists in. Truth of whatever kind is the proper object of the intellect; its cultivation then lies in fitting it to apprehend and contemplate truth. Now the intellect in its present state, with exceptions which need not here be specified, does not discern truth intuitively, or as a whole. We know, not by a direct and simple vision, not at a glance, but, as it were, by piecemeal and accumulation, by a mental process, by going round an object, by the comparison, the combination, the mutual correction, the continual adaptation, of many partial notions, by the employment, concentration, and joint action of many faculties and exercises of mind. Such a union and concert of the intellectual powers, such an enlargement and development, such a comprehensiveness, is necessarily a matter of training. And again, such a training is a matter of rule; it is not mere application, however exemplary, which introduces the mind to truth, nor the reading many books, nor the getting up many subjects, nor the witnessing many experiments, nor the attending many lectures. All this is short of enough; a man may have done it all, yet be lingering in the vestibule of knowledge:—he may not realize what his mouth utters; he may not see with his mental eye what confronts him; he may have no grasp of things as they are; or at least he may have

¹From *The Idea of a University*, by John Henry Newman, 1852.

no power at all of advancing one step forward of himself, in consequence of what he has already acquired, no power of discriminating between truth and falsehood, of sifting out the grains of truth from the mass, of arranging things according to their real value, and, if I may use the phrase, of building up ideas. Such a power is the result of a scientific formation of mind; it is an acquired faculty of judgment, of clear-sightedness, of sagacity, of wisdom, of philosophical reach of mind, and of intellectual self-possession and repose, —qualities which do not come of mere acquirement. The bodily eye, the organ for apprehending material objects, is provided by nature; the eye of the mind, of which the object is truth, is the work of discipline and habit.

This process of training, by which the intellect, instead of being formed or sacrificed to some particular or accidental purpose, some specific trade or profession, or study or science, is disciplined for its own sake, for the perception of its own proper object, and for its own highest culture, is called Liberal Education; and though there is no one in whom it is carried as far as is conceivable, or whose intellect would be a pattern of what intellects should be made, yet there is scarcely any one but may gain an idea of what real training is, and at least look towards it, and make its true scope and result, not something else, his standard of excellence; and numbers there are who may submit themselves in good measure. And to set forth the right standard, and to train according to it, and to help forward all students towards it according to their various capacities, this I conceive to be the business of a University.

2

Now this is what some great men are very slow to allow; they insist that Education should be confined to some particular and narrow end, and should issue in some definite work, which can be weighed and measured. They argue as if every thing, as well as every person, had its price; and that where there has been a great outlay, they have a right to expect a return in kind. This they call making Education and Instruction "useful," and "Utility" becomes their watchword. With a fundamental principle of this nature, they very naturally go on to ask, what there is to show for the expense of a University; what is the real worth in the market of the article called "a Liberal Education," on the supposition that it does not teach us definitely how to advance our manufactures, or to improve our lands, or to better our civil economy; or again, if it does not at once make this man a lawyer, that an engineer, and that a surgeon; or at least if it does not lead to discoveries in chemistry, astronomy, geology, magnetism, and science of every kind.

Let us take "useful," as Locke takes it, in its proper and popular sense, and then we enter upon a large field of thought, to which I cannot do justice in one Discourse, though to-day's is all the space that I can give to it. I say, let us take "useful" to mean, not what is simply good, but what tends to good, or is the instrument of good; and in this sense also, Gentlemen, I will show you how a liberal education is truly and fully a useful, though it be not a professional, education. "Good" indeed means one thing, and "useful" means another; but I lay it down as a principle, which will save us a great deal of anxiety, that, though the useful is not always good, the good is always useful. Good is not only good, but reproductive of good; this is one of its attributes; nothing is excellent, beautiful, perfect, desirable for its own sake, but it overflows, and spreads the likeness of itself all around it. Good is prolific; it is not only good to the eye, but to the taste; it not only attracts us, but it communicates itself; it excites first our admiration and love, then our desire and our gratitude, and that, in proportion to its intenseness and fulness in particular instances. A great good will impart great good. If then the intellect is so excellent a portion of us, and its cultivation so excellent, it is not only beautiful, perfect, admirable, and noble in itself, but in a true and high sense it must be useful to the possessor and to all around him; not useful in any low, mechanical, mercantile sense, but as diffusing good, or as a blessing, or a gift, or power, or a treasure, first to the owner, then through him to the world. I say then, if a liberal education be good, it must necessarily be useful too.

You will see what I mean by the parallel of bodily health. Health is a good in itself, though nothing came of it, and is especially worth seeking and cherishing; yet, after all, the blessings which attend its presence are so great, while they are so close to it and so redound back upon it and encircle it, that we never think of it except as useful as well as good, and praise and prize it for what it does, as well as for what it is, though at the same time we cannot point out any definite and distinct work or production which it can be said to effect. And so as regards intellectual culture, I am far from denying utility in this large sense as the end of Education, when I lay it down, that the culture of the intellect is a good in itself and its own end; I do not exclude from the idea of intellectual culture what it cannot but be, from the very nature of things; I only deny that we must be able to point out, before we have any right to call it useful, some art, or business, or pro-

fession, or trade, or work, as resulting from it and as its real and complete end. The parallel is exact:—As the body may be sacrificed to some manual or other toil, whether moderate or oppressive, so may the intellect be devoted to some specific profession; and I do not call *this* the culture of the intellect. Again, as some member or organ of the body may be inordinately used and developed, so may memory, or imagination, or the reasoning faculty; and *this* again is not intellectual culture. On the other hand, as the body may be tended, cherished, and exercised with a simple view to its general health, so may the intellect also be generally exercised in order to its perfect state; and *this is* its cultivation.

Again, as health ought to precede labour of the body, and as a man in health can do what an unhealthy man cannot do, and as of this health the properties are strength, energy, agility, graceful carriage and action, manual dexterity, and endurance of fatigue, so in like manner general culture of mind is the best aid to professional and scientific study, and educated men can do what illiterate cannot; and the man who has learned to think and to reason and to compare and to discriminate and to analyze, who has refined his taste, and formed his judgment, and sharpened his mental vision, will not indeed at once be a lawyer, or a pleader, or an orator, or a statesman, or a physician, or a good landlord, or a man of business, or a soldier, or an engineer, or a chemist, or a geologist, or an antiquarian, but he will be placed in that state of intellect in which he can take up any one of the sciences or callings I have referred to, or any other for which he has a taste or special talent, with an ease, a grace, a versatility, and a success, to which another is a stranger. In this sense then, and as yet I have said but a very few words on a large subject, mental culture is emphatically *useful*.

If then I am arguing, and shall argue, against Professional or Scientific knowledge as the sufficient end of a University Education, let me not be supposed, Gentlemen, to be disrespectful towards particular studies, or arts, or vocations, and those who are engaged in them. In saying that Law or Medicine is not the end of a University course, I do not mean to imply that the University does not teach Law or Medicine. What indeed can it teach at all, if it does not teach something particular? It teaches *all* knowledge by teaching all *branches* of knowledge, and in no other way. I do but say there will be this distinction as regards a Professor of Law, or of Medicine, or of Geology, or of Political Economy, in a University and out of it, that out of a University he is in danger of being absorbed and narrowed by his pursuit, and of giving Lectures which are the Lectures of nothing more than a lawyer, physician, geologist, or political economist; whereas in a University he will just know where he and his science stand, he has come to it, as it

were, from a height, he has taken a survey of all knowledge, he is kept from extravagance by the very rivalry of other studies, he has gained from them a special illumination and largeness of mind and freedom and self-possession, and he treats his own in consequence with a philosophy and a resource, which belongs not to the study itself, but to his liberal education.

This then is how I should solve the fallacy, for so I must call it, by which Locke and his disciples would frighten us from cultivating the intellect, under the notion that no education is useful which does not teach us some temporal calling, or some mechanical art, or some physical secret. I say that a cultivated intellect, because it is a good in itself, brings with it a power and a grace to every work and occupation which it undertakes, and enables us to be more useful, and to a greater number. There is a duty we owe to human society as such, to the state to which we belong, to the sphere in which we move, to the individuals towards whom we are variously related, and whom we successively encounter in life; and that philosophical or liberal education, as I have called it, which is the proper function of a University, if it refuses the foremost place to professional interests, does but postpone them to the formation of the citizen, and, while it subserves the larger interests of philanthropy, prepares also for the successful prosecution of those merely personal objects, which at first sight it seems to disparage.

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If then a practical end must be assigned to a University course, I say it is that of training good members of society. Its art is the art of social life, and its end is fitness for the world. It neither confines its views to particular professions on the one hand, nor creates heroes or inspires genius on the other. Works indeed of genius fall under no art; heroic minds come under no rule; a University is not a birthplace of poets or of immortal authors, of founders of schools, leaders of colonies, or conquerors of nations. It does not promise a generation of Aristotles or Newtons, of Napoleons or Washingtons, of Raphaels or Shakespeares, though such miracles of nature it has before now contained within its precincts. Nor is it content on the other hand with forming the critic or the experimentalist, the economist or the engineer, though such too it includes within its scope. But a University training is the great ordinary means to a great but ordinary end; it aims at raising the intellectual tone of society, at cultivating the public mind, at purifying the national taste, at supplying true principles to popular enthusiasm and fixed aims to popular aspiration, at giving enlargement and sobriety to the ideas of the age, at facilitating the exercise of political power, and refining the

intercourse of private life. It is the education which gives a man a clear conscious view of his own opinions and judgments, a truth in developing them, an eloquence in expressing them, and a force in urging them. It teaches him to see things as they are, to go right to the point, to disentangle a skein of thought, to detect what is sophistical, and to discard what is irrelevant. It prepares him to fill any post with credit, and to master any subject with facility. It shows him how to accommodate himself to others, how to throw himself into their state of mind, how to bring before them his own, how to influence them, how to come to an understanding with them, how to bear with them. He is at home in any society, he has common ground with every class; he knows when to speak and when to be silent; he is able to converse, he is able to listen; he can ask a question pertinently, and gain a lesson seasonably, when he has nothing to impart himself; he is ever ready, yet never in the way; he is a pleasant companion, and a comrade you can depend upon; he knows when to be serious and when to trifle, and he has a sure tact which enables him to trifle with gracefulness and to be serious with effect. He has the repose of a mind which lives in itself, while it lives in the world, and which has resources for its happiness at home when it cannot go abroad. He has a gift which serves him in public, and supports him in retirement, without which good fortune is but vulgar, and with which failure and disappointment have a charm. The art which tends to make a man all this, is in the object which it pursues as useful as the art of wealth or the art of health, though it is less susceptible of method, and less tangible, less certain, less complete in its result.

EDUCATION FOR LIVING¹

Philip N. Youtz

THE function of American college and university education is to teach students how to live. Education is basically an anthropological problem. The purpose of the school is to develop the whole man and to prepare him to live efficiently and happily in the most intricate and rapidly changing culture this planet has produced.

Were we not primitive still, we should start long before school and college to breed students with the same care which we now devote to the breeding of plants and animals. The family institution, which we share with the higher animals, would be studied and either modified or supplanted to give our well-bred student the best possible environment during his early and most im-

¹From *The Forum*, November, 1937.

pressionable years. Primary and secondary schools would be scrapped, and new and more refined educational instruments would be devised to serve the purpose of training the sensitive and growing student during the creative unfolding of his powers. The college and university would be discarded, and in their place we should provide a new instrumentality especially designed to teach the student all that is known about the art of living. In face of the ignorance, prejudice, and superstition which characterize our culture, such an intelligent approach to the educational problem is impossible. The best we can do is to focus attention on one step in the educational system and ask ourselves candidly whether it is not indeed the worst of possible instruments for the purpose intended and whether we are not justified in cautiously experimenting with a view to producing a new college and university capable of dealing with our present grade of students.

The most obvious difficulties with colleges today are easy to point out, though extremely hard to remedy.

First, the students are poorly bred, carelessly nurtured, and badly prepared. There seems very little that can be done about this situation as long as parenthood is the privilege of the unfit as well as the fit and as long as primary and secondary schools remain more political than educational institutions.

Second, the college today is a marriage of convenience between the medieval literary type of university and the modern scientific school. As might be expected from such an unnatural union there has arisen much dissent. The moderns have won to the extent of abandoning Greek and Latin, but the medieval partner has shown remarkable vitality, insisting that education remain largely an affair of words and books. Last, colleges and universities are generally run for faculties, not for students. They are designed to provide a pleasant academic retreat for professors who are deeply interested in their chosen subjects but who care very little about the job of education. The student is the forgotten man at most universities.

The graduate of twenty years' standing looks back at his futile struggles to apply a college education to the business of living with complete disillusionment. If he worked his way through school in part or in whole, he knows well that the four years of college and the four years of graduate work which followed were not worth the effort. He was the victim of America's best organized and most respected racket operating entirely within the law. His advice to the younger man who is just reaching the college age is (*a*) do not go to college at all or (*b*) accept the present college as a pleasant club where an intelligent man may enjoy four years of comparative leisure or (*c*) join with a group of other students and persuade some college president to try out the following curriculum.

COLLEGE

The new curriculum will have the revolutionary aim of preparing students for twentieth-century living. Its most radical feature will be that it starts with the student.

What is a student? He is a physically mature and mentally adolescent animal who must compete in a civilization which moves a hundred times more rapidly than the one which his grandparents knew. As a healthy animal, he has sex as a dominant interest. Physiologically, he is ready for a mate. For social and economic reasons this mating must be postponed for a period of years. Muscularly, he is ready for the chase and for the warfare in which his not very remote ancestors delighted, though he lives in a culture which provides food without hunting and which regards warfare as a breakdown of civilization. He is very imaginative; he is subject to day-dreaming; he is emotionally unstable; intellectually, he is extremely naïve. Most of his attitudes are derived from his family and a narrow circle of friends. He is curious but not informed. He is personal in his judgments. He is earnest and trustful and eager to learn the mysteries of this modern world. Finally, he is away from home for the first time and knows nothing about taking care of himself or of planning his own life.

This young animal is an organism, and each part of his nature affects every other part. Ask him to write a paper on Shakespeare's use of the sonnet, and he is in such an emotional state over having succeeded or failed to make a fraternity that he writes gibberish. Demonstrate a mathematical solution to him, and he loses the thread of the reasoning because his fancy has wandered to the contemplation of some glamorous individual of the opposite sex. Lecture to him on Plato, and he falls asleep, in spite of having drunk three cups of strong coffee, because physically he is at the height of his powers and enjoys football so keenly that he plays until he is dead tired. You can't concentrate on training one part of him without having to reckon with the whole man. This fact is so fundamental that only college and university professors could have overlooked it.

Whether or not there is much organization or relation in the varied fields of human endeavor, each of us has to achieve a certain unity of experience in his own education. The mind is incessantly at work trying to integrate all the fragments of knowledge into one connected fabric. Subjects are separated, and courses of study are marked off chiefly for convenience. Because of the vast accumulation of knowledge, it is necessary to departmentalize to an ever increasing extent. But students, especially, in college, need less division and more unification of education. They need to have the vast panorama of human achievement with all its interrelation imprinted on their minds before they are bewildered by the job of exploring in detail minute parts of the wide

terrain. Generations of college students have tried to assimilate five or six unrelated courses a semester without success. The task of organizing and unifying knowledge must be undertaken by the college, for it cannot successfully be achieved by an immature student.

Closely connected with this requirement is the need of bringing all teaching into relation with the student's own experience. Colleges are not offering subjects for their own sake but for the student's sake. It is just as simple to teach a course such as mathematics with dramatic examples from banking, insurance, and engineering as to teach it as an abstract and unrelated subject. Sound education should take the student's own limited experience as a base line and help him to triangulate from that to the most distant stars.

We may summarize by saying that the new curriculum must be developed as a unity for a young human animal who is himself an organic individual, not a collection of parts. To serve the whole man we must have a curriculum that is in itself well knit and well balanced—one which contains panoramic courses presenting the whole picture of culture. If we now discuss certain parts of this curriculum we must be on our guard to avoid thinking of these parts except as incomplete fragments of the whole structure.

Any sound education must begin by training the student physically. What kind of physical life is he going to live? One man in several thousand becomes a professional athlete or a director of physical training. A fair proportion becomes farmers or sportsmen, who need a well-developed physique. The great majority of college men and women, however, faces sedentary life in which large lung capacity and heavy muscles are a liability rather than an asset.

How can our youths be prepared to endure a sedentary life with its inevitable dangers of stooped shoulders and sagging abdomen? The answer is simple. They must be trained in habits of light exercise of a type which will tone up the entire body. If they are to persist in this exercise it must be enjoyable. If it is linked with games and sports it will have sufficient appeal to the individual to provide the motivation for lifelong practice.

Let us begin by requiring each student to learn to walk, run, dance, and swim correctly. Walking and running will teach proper carriage and breathing. Dancing is an acceptable form of physical exercise in college because it encourages natural attitudes toward the other sex and because it provides a wholesome outlet for the sex desires which are so imperious at college age. Socially, dancing is a great asset and gives the student poise and grace. More than any other training it teaches him to be at ease with his fellows. As for swimming, few of us will have the opportunity to make gallant rescues or save ourselves from a watery grave, but swimming is one of the most enjoyable

and generally beneficial of exercises. These four physical arts can be appreciated keenly through life, and without them no life is complete.

Our next physical requirements are games of the type that can be enjoyed socially after college—golf, tennis, squash, handball, bowling, and badminton. Anyone who can play one or two of these games fairly well has taken out insurance for life against physical failure. He is sure of plenty of carefree recreation and wholesome exercise. No student should be allowed to graduate unless he is able to play some of these games well.

Students who reach college unable to ride a bicycle, drive a car, fly, ski, snowshoe, sail a boat, ride a horse, fish and shoot should be given individual instruction. These are physical skills which are in wide demand in the modern world and which have great recreational value.

In the new curriculum gymnasiums would be used only as places where games enjoyed in afterlife might be learned and where in individual cases certain corrective exercises might be taken under a doctor's orders. The whole tiresome rigmarole of calisthenics, weight pulling, and bending would be discarded as of doubtful benefit.

The sooner the public competitive sports are professionalized, the better it will be for American education. They have nothing to do with physical training, and are carried on simply for advertising and to satisfy the barbaric pleasure which college alumni find in gladiatorial combats. Football, soccer, baseball, hockey, basketball, and the rest are in the same class as bullfighting or prizefighting. They will always bring good gate receipts because people enjoy primitive competitive sports that require strength, skill, and courage. But they should be played by professionals, and colleges should devote themselves to educational pursuits. They are nearly valueless, educationally speaking, because they train only the few, they overtrain this minority, they do not carry over into afterlife, they consume a tremendous amount of time and energy, and they teach the nonparticipating majority the unwholesome habit of enjoying sports vicariously.

Along with the development of recreational skills there should be a brief course in applied physiology. The average man knows less about his bodily mechanism than he does about the design of his automobile or radio. Physiology, not the kind of thing that is usually taught in colleges under this name, is actually one of the most fascinating of all studies; and, because every human being possesses a body which he can come to know and control, it may become a major interest.

Each person has an individual physical problem, and it is keen sport to direct one's own physical mechanism in such a way as to obtain the highest possible performance. Yet most of us abuse ourselves physically during our

youth and, as we get older, do little or nothing to cure our disabilities or to ward off impending ailments. One has only to recall the wild excesses of youth to realize that most students waste their physical resources futilely long before they appreciate their value.

Included in this section of our curriculum should be some sound dietetics calculated to train the student to regulate his eating for enjoyment and physical well-being. The promiscuous menu of the average student would destroy any other animal but man within a month. It leaves most students with a weakened digestion for the balance of their days.

In order to carry out this program, which will serve the purpose of developing physical resources and of establishing habits and skills that will keep a man fit throughout life, the college environment will have to be replanned. Much of the student's life which is now left to his own haphazard impulses must be controlled and directed. But the co-operation of the student himself will be an essential feature of any successful physical program, because the aim of the college must be students who are self-disciplined, not students who are faculty-disciplined.

A second division of our new college curriculum will be devoted to art in all its phases, both practical and theoretical. Traditionally the word *art*, at least in colleges, has stood for a somewhat rarefied and overaesthetic study of painting, sculpture, and architecture. In our curriculum art will include music, cinema, photography, dance, industrial design, costume design, interior design, landscape architecture, drama, poetry, the novel, and handicrafts, as well as painting, sculpture, and architecture. The art faculty will take pains to acquaint the student with all the current phases of art so that when he leaves college he will know every art tendency, whether it be a new technique in the cinema or the most recent trend in architecture. That is to say, he will not think of art as a term applied to one mode of expression but will be aware of the worth of all forms of creative activity and he will regard art not as something exhumed from the past but as a very vivid present enterprise.

Each student will be given the opportunity to participate in the practice of several of the arts and will be required to be proficient as an artist in one or more fields. He will be expected to live a creative life to the full extent of his abilities. For the majority of the students this participation will probably take the form of intelligent criticism and appreciation. For a few talented ones it will be a career.

As far as art is concerned, most of our college campuses are strongholds of barbarism. Student taste rarely rises above the lure of swing music, melodrama, and romantic movies. Most students are unaware that any other type of art exists. As to our college faculties—they are controlled by a profound in-

tellectual snobbery toward any practical participation in the arts. They hide behind a long outmoded philosophical dualism which separates the things of the mind from the things of the body. They pursue the psychologically absurd theory that it is possible to educate the mind without considering the physical and emotional human being of which that mind is inseparably a part.

Far from being a rational creature, the student is actually controlled largely by his emotions. All his drives and most of his judgments are basically emotional. As he matures he gains some direction over these feelings, but to a great extent all human life is conditioned by emotion. The chief function of the arts is to afford pleasurable and creative outlets for this emotional nature with which we are endowed. Emotions, like any other human functions, may be trained and refined. Art supplies both the stimulus and the satisfaction for our emotional natures. Neglected, emotions may atrophy, thus robbing the individual of his sensitivity and imagination; or they may break out in animal-like behavior such as unrestrained anger and sexual indulgence; or they may, if repressed, produce some psychological abnormality.

Our Puritan tradition has conditioned us to shun emotional experiences as immoral. We have been taught to admire the Stoic and suspect the Epicurean. Emotions, however, are the source of most of our energy and ambition. It is through them that we experience our greatest satisfaction. They are the inspiration for all imaginative activity, for all creative thinking. Emotion is one of the greatest endowments of the human race.

Any education which neglects the training and satisfaction of the emotions is certain to produce intellectual sterility. For thinking depends on imagination, and imagination depends on emotional stimulus. Though we have built up the fiction that thinking is an abstract and cold process of reasoning, actually most of us do our best thinking when we are bodily and emotionally attuned to an intellectual problem.

The danger that our emotions will run away with our judgment is less hazardous than the danger that our judgments will lack imagination. Both dangers can be avoided by developing satisfying types of artistic experience in which we habitually participate. Emotionally it is quite as important for a man of affairs to play a piano or a violin after a day of activity as it is for a musician to enjoy his instrument. Though the man of affairs may not be sufficiently skilled to play in public, his playing may serve the useful purpose of restoring to him emotional equilibrium and poise.

In the usual type of college, emotional experience and training take place outside the curriculum. Whether the student chooses wine or women or prefers gambling or auto racing, the development of his emotions is sure to be controlled for the most part by fortuitous circumstances. On the other hand,

if he plays in an orchestra, takes part in a drama, enjoys amateur photography, designs furniture, learns to sketch, paints during his vacation, or carves wood, he has already found a satisfying and wholesome outlet for his emotional life.

In the new curriculum each student will be required to play at least one musical instrument. He will be taught one of the graphic arts. He will be required to write poetry or stories. He will be given the opportunity of designing and making the furniture or other useful articles with which he is surrounded. Possibly he will never have a course in aesthetics. Certainly he will never be required to take history of art as a course distinct from other history but, on the other hand, he will never be offered any course in history which does not include the artistic development of man as well as his economic and social evolution.

Art education, like physical education, will be presented in such a way as to prepare the student for lifelong participation. The aim will be to make each man proficient in one or more of the arts, so that he will preserve an amateur or professional interest in it or them as long as he lives. Indeed, no instructor will really be able to certify that a student has passed this part of the curriculum until at the end of a lifetime it is discovered whether or not some form of art remained a hobby or a profession throughout the individual's career.

The purpose of the arts in the new curriculum will be to train the taste, to free the imagination, and to give the emotions pleasant and constructive expression. The emotional nature of the student will thus become an asset rather than a wasted resource or an impediment. Taste is the mark of an educated man, imagination the sign of a productive man, and emotional balance the token of a matured man.

In the third part of the new curriculum we approach for the first time the so-called intellectual phase of education. Our muscular and emotional human animal is also a thinking being. We may divide the field of knowledge into two parts; natural history and culture history, dealing respectively with man's physical surroundings and with his cultural environment.

Under the head of natural history we shall include all the natural sciences, together with mathematics. These will not be taught as a series of unrelated subjects, such as astronomy, geology, physics, chemistry, zoology, and mathematics, but as a well-rounded study of man's entire physical environment. They will culminate in a résumé of current problems in physical science. To teach such a course, a dozen or more instructors, each a specialist in a single science, will need to collaborate. Fortunately there will be no textbooks, and the student will be forced to rely on first-hand observation, laboratory experiments, source material, and classroom discussion and demonstration.

One of the major aims of such a course will be to acquaint the student with scientific method. He will be taught to make his own observations, to classify facts as he sees them, to make guarded inductions from these facts, to formulate tentative hypotheses to check his theories and determine whether they enable him to account for all the facts and to predict the future course of physical events. He will learn the difference between inductive, empirical thinking and deductive, rationalistic reasoning. He will discover the vagaries of his senses and the limitations of his mind. He will learn that mathematics is a way of thinking exactly about quantitative relations.

As the course develops it will unfold the entire cosmic system as we understand it. The student will learn of Lyell's great discovery of the geological forces at work in creating this earth and its familiar topography. He will be introduced to the microcosm within the chemical molecule. The evolution of plants and animals will be explained to him, and man's place indicated among the anthropoids. From such a course he will emerge not with a certain number of units of science but with a unified view of the whole cosmic panorama as far as it is understood today.

The values of such a course will be three-fold. First, it will give the student the discipline of laboratory observation and experiment; second, it will offer him practice in accurate, impersonal methods of thinking about physical problems; third, it will paint for him a unified picture of the physical world in which he lives. Such an introduction to physical science should endow the student with a sympathetic and an intelligent grasp of scientific procedure and research in the more important specialized fields. It should provide him with a pattern for meeting problems of his own and with confidence in developing an experimental answer.

In such a course both the content and the thinking are educationally significant, but the latter is the more vital for intelligent living. Ability to think scientifically should be the essence of the equipment which a student gains from college. The habit of using both the senses and the mind, of keen observation and accurate generalization, is one which must be practiced throughout life. Rigorous scientific thinking has advanced our culture further than have all the elaborate and pretentious philosophies ever propounded. It is safe to assert that the student will reap more benefit from a thorough study and practice of humble inductive logic than from all the dialectic brilliance of deductive logic. The modern world needs men with a grasp of facts, not facile, persuasive sophists.

The fourth and final division in our new curriculum will be culture history. Under this head will be included all the social sciences. Instead of being taught as separate subjects, they will be unified as far as possible. Unity will be

achieved by a synthetic history of human development which will include anthropology, archaeology, ethnology, economics, sociology, politics, art, literature, and philosophy. This will begin with the dawn of culture, and during the first half of the course will come down to the present time. The latter half of the course will focus on current problems so that the student will have a complete picture of our contemporary culture.

The new all-inclusive history course will attempt to deal scientifically with culture, presenting not a eulogistic account of human achievement but the long hard struggle, with frequent defeats, through which modern civilization has been achieved. Contemporary culture will be analyzed with equal candor, so that the student will emerge from college not with a conception of an ideal republic such as Plato pictured but with a very intimate and realistic knowledge of the far from ideal republic in which we live.

The aim of the course will be to produce an intelligent citizen capable of living efficiently and co-operatively in a twentieth-century community. In our conventional college subjects there is very little carry-over into life after college. History somehow never reaches the present. At least half this fourth section of our curriculum will be devoted to a detailed analysis of our current social structure.

To teach such a course we shall again have to draw on the services of a corps of instructors from different departments. We shall have to find men who have not retreated into the security of the past but who are capable of analyzing and presenting the perplexing intricacies of the present. They must be men who believe that it is not beneath academic dignity to discuss political issues. They must have the background necessary to understand economic problems for which answers have not yet been found.

The source material for the latter half of this course must be life itself as we see it through our newspaper and periodical literature. Students must be given the opportunity of going to legislatures in session, of visiting industrial plants, of studying businesses at first hand, and of seeing public institutions from the inside, so that they can understand the working of our intricate social-economic machine. Here again the textbook must be discarded, and the student encouraged to go to source material. Not only that—but he must be taught to make impartial surveys and gather his own data.

The degradation of our democracy is due to pressure minorities which find that political plundering yields a far greater profit than the more primitive forms of plundering which marked earlier stages of human development. Our citizenry has been so engrossed in private interests and so apathetic and ignorant as regards public affairs that it has been easy for these groups to exploit the country. Our new education must aim at training a citizenry which

is interested in government, which understands it and which participates effectively in it.

The latter part of our course in culture history might well be devoted to problems which democracy has hitherto found insoluble. Our cumbersome and often unjust judiciary system, our generally corrupt and inefficient city governments, our outmoded county governments, our State political machines, the spoils system as applied to the federal government—all represent problems which we devoutly hope the next generation will solve but to which our generation has made only modest contributions. Our great need is to orient the student so that he will be ready to assume his social obligations as a citizen and not devote his energies exclusively to his private affairs.

Culture history will introduce the student to a new pattern of purposeful thinking, the kind which men do when they attempt to create an orderly and pleasant society in which to live. This type of constructive thinking should be a lifelong practice. It must be as rigorous as scientific thinking yet serve social ends rather than purely impersonal goals of exact knowledge. It is the process by which literature, law, government, business, and industry are originated and are advanced. It actually is a kind of "poetic" thinking, for man is the "maker" of his culture rhythms.

The new curriculum contains but four courses; physical education, creative arts, natural history, and culture history. This curriculum is designed not around subject matter or educational theory but to meet the needs of a normal young human animal who must be prepared for the good life in the twentieth century. It begins with his physical training as a foundation, includes his emotional and imaginative life, considers his natural environment, and finally extends to the intricate structure of the cultural environment. Such a curriculum educates the whole man. It is strictly functional, aiming to shape habits, interests, and thinking in such a way as to serve the student equally well as a foundation for graduate school and as a basic pattern throughout life.

The new curriculum, while not despising content, is fundamentally concerned with teaching the student certain types of vital activity of body, imagination, senses, and mind. These trained modes of behavior all contribute to the full life. As a result of this curriculum the student should have learned to function effectively on each level of his being. He should be able to coordinate, to observe, to imagine, and to think easily and effectively. The new educational theory resembles the ancient Greek ideal of harmony between body and soul.

LITERATURE AND SCIENCE: A STUDY IN CONFLICT¹

Charles I. Glicksberg

THE CONFLICT between literature and science, like the much more ancient one between science and religion, is still going on. Men of letters face the choice of becoming "slaves" of science (the strategy of submission) or remaining intransigent and independent (the strategy of revolt). The logic of events, the pressure of tradition, and a complex of professional motives have forced them to accept the gage of battle. Since they cannot resign themselves to the sovereignty of science, they must perforce revolt.

But what are they to revolt against? There is the rub. There is little agreement among literary men as to what they most object to in the scientific discipline. The warfare between literature and science turns into a war of scattered forces attacking irregularly on a wide, confused front. If the writers were clear in their mind as to what they were fighting *against* (they know what they are fighting *for*), there might be some hope of reconciliation or of waging war to a decisive issue. As it is we are left in a befuddled state.

What are some of the explicitly voiced objections against science? First of all, the scientific method is condemned on the ground that it is analytical and empirical; it is therefore fragmentary, not organic and universal. Second, it is concerned primarily with the realm of facts, not of values; it gathers data, it does not interpret and evaluate them. Third, instrumentalism may be a good laboratory technique; it is not a way of life. Fourth, literature differs in kind from science; it has its own laws and techniques; as an autonomous field of expression it is not susceptible of scientific analysis. Finally, the philosophy of science is squarely opposed to that of literary humanism.

The fatal weakness of those who attack scientists for their narrow vision and mistaken assumptions is that they themselves take a number of things for granted which are altogether dubious. By appealing directly to the innermost intuitions of the reader, they set up an untenable dichotomy between reason and intuition, head and heart. A refined sensibility, we are given to understand, is capable of a more profound apprehension of reality than the mind of the physicist—as if the scientist possessed no intuitions at all. Another and no less fatal error they commit is to assume a transcendental order of existence to which they, by virtue of their refined sensibility and clairvoyant intuitions, have special access. Fortified with such specious arguments, they call for a liquidation of our extraverted, mechanical, materialistic life and

¹From *The Scientific Monthly*, December, 1944. Reprinted by permission of the publishers.

a return to the true inner self, a regeneration of the soul, a lifting of the individual from the naturalistic to the spiritual and creative level of the absolute.

All this sounds highly inspiring if one were only able to grasp concretely what is meant by these abstractions. The prestige of literature is at stake, and the *littérateurs* will not surrender without a desperate struggle. Why should "knowledge" be reserved for the scientific discipline, while literature—well, what does it do? It expresses emotions, it organizes attitudes, it communicates the wholeness and unique particularity of an experience, but it is not concerned with either knowledge or truth. It does not deal with ideas or their logical relationship or their empirical validity. Therefore, the defenders of literature hasten to demonstrate that literature utilizes a different linguistic function from that common to science, and that artistic truth is somehow superior to the truths of science.

Why so many writers and critics should feel a constitutional antipathy towards science is one of the mysteries psychology must explore, but this antipathy is at the root of the conflict that is still raging today. In the weather-beaten perspective of time, the result of this ideological struggle may prove as important in its effect on the course of civilization as the outcome of World War II. The *littérateur*, defending his professional interests, has become a forceful propagandist in a movement designed to undermine the validity of science. Even if the scientist wished to do so, he is not in a position to counteract this noisy stream of propaganda. His aim is to humanize and universalize the philosophy of science, to recommend the virtue of suspended judgment based on observation and critical reflection. He would extend the use of the method of empirical rationalism not only to specialized fields of investigation but also to the realm of politics, economics, ethics, social behavior.

It is indeed strange to find men of letters fulminating against science as if it were a fatally destructive Juggernaut, a Frankenstein. Both in England and the United States, the intellectuals give vent to hysterical squeaks of indignation at the rapid spread of scientific ideas. Some powerful emotional leaven must be at work to call forth this violent attitude of opposition, too irrational in substance to be explained on purely logical grounds. There is the shrill outcry that science spells the death of individuality. Impersonal, quantitative, precise, it would standardize not only commodities and methods of production but also men. It would reduce the world, "so various, so beautiful, so new," to a single, mechanical unit, whereas literature is based essentially on the qualitative principle. The creative life is concerned with values, tradition, ideals—elements which are alien and antipathetic to the scientific outlook.

Science, it is true, endeavors to arrive at objectivity in its observations and conclusions, thus tending as far as possible to eliminate the subjective, the bias of temperament, the fallibility that is human—all-too-human. Even if we grant this much, it is still difficult to understand why the writers are so envenomed in their protests. The argument directed against the mechanical aspects of science is a disingenuous rationalization. Something more fundamental is at stake: two world-attitudes are in conflict. If the truths of science prevail, and they are making irresistible headway on all fronts, then the pretensions of literature to a higher, unassailable, eternal truth must be abandoned. Some critics have stressed the idea that literature is the product of a mysterious, mystical intuition. Others have maintained that it is a criticism of life, concerned with moral values and with the projection of beauty otherwise unapprehended and unexpressed. It voices the universal through the medium of the particular; it affirms and gives imaginative life to the enduring faith by which men live. But if science strips off the veil of divinity from the ark of creation, if the sublime and universal truth of literature is shown to be neither sublime in origin nor objectively valid, if beauty and intuition are disintegrated by the ultraviolet rays of scientific analysis, then what is left for the writer? Literature becomes no more than a source of refreshment, a form of play, the sublimation of superfluous or frustrated energies. It can provide enjoyment and even illumination but not certitude.

Thus at the heart of this embattled controversy a fierce professional rivalry manifests itself. A rivalry perhaps unconscious in nature, but the writers who pitch angrily into science are, whether or not they realize it, defending their vested interests as purveyors of a "higher" truth. That is why they are in such a stew of revolt. In their wrathful desperation they seize upon any missile that lies ready to hand and fling it at the Mephistophelian head of Science, the dark angel destroying the religious sense and casting men adrift on a shoreless sea of doubt. The gods are unseated, and there is nothing to take their place. Man finds himself rootless, depersonalized, anarchic, in a universe of meaningless flux. Arbitrary, and limited in outlook, science is considered guilty of a gross and inescapable narrowing of the field of vision. Inescapable because by definition it confines itself to conclusions only about those processes and events which can be known and verified. What do these objections amount to? Nothing more than this: Science is not religion, science is not mysticism, science is not prophecy, science is not art. But who ever said it was?

If literary men persist in their uncritical assaults on science, naïvely distorting the scientific outlook, if they continue to concern themselves with intuitions of a "higher" truth, then the value of their work is bound to suffer.

Science is no longer something external and abstract; it is an intimate part of the world we live in, already an integral part of ourselves, our perceptions, our thoughts, our cultural heritage, and to ignore it is a bit of inexcusable folly.

The attitude of the humanist scholar towards science is psychologically revealing. Three ways are open to him: first, he may reject the scientific discipline, exposing its limitations and contradictions; second, he may surrender his special privileges and accept the discoveries and doctrines of science; third, he may attempt a compromise whereby science is allotted its restricted sphere of influence while literature retains its own. The first method has been tried and resulted in conspicuous failure. The second solution of the problem was for a time highly popular. Since science had come to stay, was there any good reason why literary scholarship should not become "scientific"? Humanistic scholars would beat the scientists at their own game. Thus there was instituted the fetish of research, the religion of the authenticated literary fact, the mania of resurrecting forgotten texts and manuscripts. In the intoxication of engaging at last in "scientific" research, the work of interpretation and critical appraisal was forgotten.

But the scholars could not long fool themselves with the talisman of scientific research. This was getting them nowhere. What were they doing but turning out a race of glorified pedants, dry-as-dust scholars without taste, understanding, or critical appreciation? The method was supposed to be scientific, but the results were neither literature nor scholarship nor science. There was no high purpose, no unifying principle, behind these labors. Scholars had gone astray because they had, so they professed to believe, capitulated to the scientific discipline. It was, on the contrary, their lamentable misconception of the function of science, their crude failure to understand the nature and limitations of the scientific method, which had trapped them in this cul-de-sac.

If both methods had failed to work, the third was still available: a form of compromise. To each would be assigned a kingdom which it could govern: to science what belonged to science, to literature what was distinctively the province of letters. Thus the troubled waters were to be stilled. Unfortunately the truce was soon broken, for the simple reason that the literary scholars entertained a peculiar conception of the demesne they had been assigned to rule as their own. Science was arbitrarily cut off from the sphere of value, which then became a function exclusively reserved for the humanities. "Surely," Professor Norman Foerster declares in *Literary Scholarship*, "it is time for scholars in the humanities to make clear to themselves the fact that science is not the only respectable kind of inquiry." Now

what can one mean by a "respectable" kind of inquiry? Even if we grant that literary scholarship must forge its own methods, why this emphatic repudiation of science? Why make the gratuitous assumption that values, which are the special concern of the humanities, lie outside the jurisdiction of science? Though more temperate in tone, Professor Foerster's attack is substantially like the one Irving Babbitt delivered in 1908 when he published his *Literature and the American College*.

Only one conclusion is possible: men of letters, whatever the plausibility of the rational arguments they advance, are opposed to science because it destroys the picture of the universe in which they wish to believe. If the statements of science are true, then the as-if fictions of poetry must be discarded as sheer fantasy or make-believe. Yet there is no reason why the discoveries of science, once they are taken into the mental climate of the race, cannot, as William Wordsworth believed, become the nutriment on which poetry can feed. The advance of science does not sign the death-warrant of poetry. Whether or not he accepts the scientific outlook, the poet cannot sweat it out of his system. Whether he likes it or not, he inherits the culture of his age, and the culture of our time is predominantly scientific. There is not a major poet writing today whose work does not in some measure reveal the revolutionary impact of science on his thinking, his interpretation of the world, his philosophy of values. The enforced isolation of science from traditional literary culture is an unsatisfactory state of affairs. A culture that deliberately divorces itself from the dominating ideas of its time dooms itself to pedantic futility.

The real issue at stake, then, is whether literary truth can be put into a separate category, entirely distinct from scientific truth. If literature presumes to communicate "truth," then this truth, no matter how derived or expressed, must compete on the same terms and in the same open market with scientific truths. There can be no exemptions, no dialectical distinctions. Either literature voices truth or it does not. If it does, then it must be prepared to meet the challenge of science.

In *The Nature of Literature*, another of the numerous attempts to explain literature in its relation to science, language, and human experience, Professor Thomas Clark Pollock contends that the function of science is to communicate referential meaning, while that of literature is to express and communicate the wholeness of experience, experience in all its immediacy and complexity, its aliveness and unabstractable realness. Once he accepts these limiting conditions, the scientist is neatly trapped. For "reality" cannot be defined or exhausted in referential terms. We get abstractions and generalizations, not the actual reality of human experience. Literature is presumably

unique because it communicates the quality of experience, not abstractions from these experiences. In short, literary expression is alleged to be closer to the stuff of life, furnishing a more vital approximation to reality, than the abstractions of science. This theory leaves out the fact that the experience which it is the function of literature to communicate is also an abstraction. There is no correspondence, except a purely symbolic one, between experience and expression. A lyric kiss is but the fugitive shadow of a kiss.

This brings up the problem of truth in poetry, for poetic truth is a special instance of literary truth. Must emotions be forced into the channels of the reasonable and the valid, or can they lead a charmed life of their own, needing no excuse for being? There have been critics like Coleridge and I. A. Richards who argue that poetic beliefs have no connection at all with factual propositions. In *Communications*, Karl Britton concludes that:

... imaginative writing has its quite distinctive "truth" and "falsity," its "reasonings" of the heart that Reason does not know; its "meaning." But for these different features of imaginative writing, the terminology of science and history is inappropriate and positively misleading. For the "truth" that is peculiar to poetry—its validity—is simply its value for men: this can be assessed, and statements about the value of poetry are themselves either true or false in the straightforward sense of these words. And the "reasons" of poetry are those emotional connections which are fundamental to poetry; they are not founded upon any relations of implication.

There is a flaw in this defense of poetry. If the "truths" peculiar to poetry are simply their value for men, apart from the rational-empirical truths of science, then the implication holds that poetry can entertain any truths at all so long as these are pleasing to the emotional needs of readers. Poetry therefore becomes a sublimation, a therapeutic, a land of make-believe, a blissful dream-world, a realm of delightful fictions. Such a defense draws a sharp line of cleavage between the truths of poetry and those of science. Actually no such cleavage exists. In their efforts to reach to the heart of Nature, many poets have turned eagerly to the scientific dispensation. When the poets of the Romantic school, led by Wordsworth, insisted that writers should keep their eye on the object and report truly what they beheld, they achieved a creative triumph of the scientific method. Wordsworth might ridicule the botanist who peeps and botanizes on his mother's grave, but he himself used his observation of plants and birds and natural scenery to excellent effect.

Exactly what science could do for poetry is a question that, until recently, had never been seriously asked. The problem, however, had not been correctly grasped. The question is not what science can do for the poet. For

that matter, what can Nature do for the poet? It is not Nature, as Coleridge sadly realized, but the interpretation of Nature that counts supremely: what the poets themselves as creative agents help to contribute. Similarly with science. If it has not exerted a fructifying influence on poetry, is the fault to be imputed to science or to the ignorance of poets, their adherence to convention, their subservience to tradition? Science has broken no promises for the simple reason that she has never made any. Science, like Nature, is there for the taking; those who have the eyes to see and the ears to hear as well as a generous share of imagination and talent can fuse this rich diversity of new material into a brilliant creative synthesis. There is no warrant for the arbitrary dualism which sets science apart from literature, or which brings them into opposition.

The poet cannot turn to science in the expectation that it will solve his problems for him, but he cannot solve them himself without its aid. It can furnish him with a foundation of related and reliable knowledge, but it cannot supply him with talent and an integrated philosophy of life. It can point out the way of reaching truth, but he must walk the whole way himself. Science can teach him all that it has so far discovered concerning heredity, the influence of the cultural environment, the structure of the human personality, the psychology of instincts and emotions and thought, but it cannot make him feel this knowledge in his blood, assimilate it organically within his being. Ideas can be stated; they cannot be communicated. Hence if the poet is foolish enough to turn to science in the belief that it will give him a ready-made esthetic philosophy, a definitive answer to all questions, a basis for the complete understanding of all problems, he is bound to be disappointed.

And there are a million and one things that a thorough knowledge of science will not do for the poet. Just as wide and varied experience and deep feeling will not necessarily make a poet, so training in the meaning and implications of the scientific method will not add one iota to the poet's talent or facilitate his mastery of form and technique. Skill in the handling of language, imaginative richness of texture, the evocation of mood, the wedding of sound and sense, the strong undercurrent of rhythm, these come as the result of training and practice and are not conditioned by the nature of the material at the poet's disposal. The linguistic medium is different in structure and aim from that of science.

But there is no escaping the impasse created by the allied problems of literary value and truth. If literature, as is confidently asserted, is the locus of value and gives expression to truth, these cannot, except in form, be distinctive and unique. The pluralistic assumption that there are all kinds of

truth, with its corollary that literature yields a form of truth not only different from, but vastly superior to, the empirical truths of science, that is the assumption which has caused so much damage and confusion. The proposition is either true or false. Our contention is that it is totally false.

Poetry cannot presume to possess a validity that is superior to, or in conflict with, the findings of science, but there is no reason in the world why the poet, like the philosopher, who has mastered the scientific culture of his age, should not know anything about life. In his iconoclastic book, *The Literary Mind*, Max Eastman has underlined this very point: that poets, as poets, do not know anything about life. Why should they "know" any less than Eastman, who is himself a poet? Is the mind of a Robinson Jeffers or Archibald MacLeish or W. H. Auden (to name but three significant contemporary poets at random) less richly endowed, less perceptive and understanding, than the mind of a psychologist or biologist? Poetry does not merely suggest the immediate quality of experience; it also passes judgment on that experience even if only by an emotional conclusion that it is good or bad.

No, science does not advance by driving poetry out. The advance of science simply imposes a greater intellectual responsibility on the poet. If poetry cannot in time assimilate the conclusions of science, it is doomed. True, it cannot feed on electrons and protons, on conditioned reflexes and the theory of relativity. Science universalizes the relations of things; literature clings to the individual experience. Exactly! Therefore there is no conflict between science and poetry. If the latter represents the world as man discovers it, the representation must correspond in some measure to the comprehensive picture of reality furnished by science. For science too reports the world as man finds it.

Though poetry and science have different aims, they have much in common. Not that poetry, steeped in scientific lore, will degenerate into guides to conduct or that poets will fashion their work according to the latest bulletin from the laboratory or clinic. Spontaneity will have to remain, freedom of choice, genuine individuality of expression. Though the literary mind is heavily handicapped in an age of science, this handicap is its greatest promise of future achievement. In his *A Hope for Poetry*, C. Day Lewis declares that modern poets "are making strenuous attempts to tap the power of science by absorbing scientific data into their own work: by 'scientific data' I mean the myriad new sense-data which scientific development has put before us." For before scientific data can be rendered accessible to the poet, it must percolate through the general consciousness, become an integral part of the social environment.

From the time of Aristotle down, the critics have been laboring hard to make it out that literature, particularly poetry, was by some divinity of circumstance, some infusion of genius and inspiration, truer than history or science, a superior kind of revelation. Our object has been not so much to separate the two disciplines—literature and science—as to bring them fruitfully together. Each can profit from the other. Science can make the writer more scrupulous, more critical, more objective, less inclined to mistake the will-o'-the-wisps of the imagination for the truth of reality. It can bring him closer to the world of sense, enable him to realize the complexity of the universe, render him more humble and earnest in his search. In turn he must be willing to submit his conclusions to the empirical test, not to believe that his truths somehow partake of transcendental essences, that he portrays a "higher Reality." He must accept the responsibility imposed on one who ventures to make the truth of life known.

Once a writer accepted the scientific outlook, his isolation would end. Poets reared in the scientific discipline would discover that no disastrous consequences followed, that their will was still "free," that they still had an infinite variety of experiences to write about. It is not the function of the poet to interpret the conclusions of science in verse; he is not a popularizer of chemistry, physics, biology, and anthropology. What he draws on as relevant to his art and fruitful in its influence is the philosophy of science, the scientific synthesis. His task is to humanize science as it applies to the varied problems that man must face, the fate he must undergo on earth. He does not paraphrase the theory of relativity; he shows it in action in his poetic universe. He does not preach doctrines; he incarnates attitudes, beliefs, and these are strongly colored by the scientific outlook. Those poets who accept the philosophy of scientific humanism will abandon their futile war against science, convinced that science offers them a real and spacious world for the exercise of their talents and a rich soil for the use of their imagination and insight.

Literature can be restored to its high estate only on the condition that it renounce both the folly of laying claim to possessing a special and superior brand of truth and the even greater folly of denying that it has any concern at all with either knowledge or truth. Both philosophies are mistaken and self-defeating. For the sake of their own salvation, writers must reaffirm the vital and redeeming principle that literature, rooted in reality and born of experience, is essentially a criticism of life, and that this criticism will prove most efficacious when it works in alliance with the scientific outlook. Literature has everything to gain and nothing to lose from such an alliance.

TRAITS OF MIND¹

AT THE time of his examination the average student hardly remembers more than 75 per cent of what he was taught. If he were a sophomore when he took the course, how much does he recall by the time of his graduation, how much five years later, how much, or how little, when he returns on his twenty-fifth reunion? Pondering on all this, the pessimist might well conclude that education is a wholly wasteful process. He would of course be wrong, for the simple reason that education is not a process of stuffing the mind with facts. Yet he would be partly right because the student soon forgets not only many facts but even some general ideas and principles. No doubt we are exaggerating. Those students particularly who have been able to unite what they learned in school or college with later studies or with their jobs do retain a surprising amount of information. Nevertheless, the real answer to the pessimist is that education is not merely the imparting of knowledge but the cultivation of certain aptitudes and attitudes in the mind of the young. As we have said earlier, education looks both to the nature of knowledge and to the good of man in society. It is to the latter aspect that we shall now turn our attention—more particularly to the traits and characteristics of mind fostered by education.

By characteristics we mean aims so important as to prescribe how general education should be carried out and which abilities should be sought above all others in every part of it. These abilities, in our opinion, are: *to think effectively, to communicate thought, to make relevant judgments, to discriminate among values*. They are not in practice separable and are not to be developed in isolation. Nor can they be even analyzed in separation. Each is an indispensable coexistent function of a sanely growing mind. Nonetheless, since exposition requires that one thing be discussed at one time, our description of these abilities must take them up in turn.

By *effective thinking* we mean, in the first place, logical thinking: the ability to draw sound conclusions from premises. Yet by logical thinking we do not mean the equipment of the specialist or what a student would learn by taking a course in formal logic. We are concerned with the student who is going to be a worker, or a businessman, or a professional man, and who does not necessarily look forward to a career in scholarship or in pure science. As a plain citizen he will practice his logical skills in practical situations—in choosing a career, in deciding whom to vote for, or what house to buy, or even in choosing a wife. But perhaps the last case is just the point where logical skills fail, although European parents might disagree.

¹From *General Education in a Free Society* (Report of The Harvard Committee), Harvard University Press, 1945, pp. 64-73.

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Logical thinking is the capacity to extract universal truths from particular cases and, in turn, to infer particulars from general laws. More strictly, it is the ability to discern a pattern of relationships—on the one hand to analyze a problem into its component elements, and on the other to recombine these, often by the use of imaginative insight, so as to reach a solution. Its prototype is mathematics which, starting with a few selected postulates, makes exact deductions with certainty. Logical thinking is involved to a degree in the analysis of the structure of a painting as well as in that of a geometrical system. In moving toward a solution, the trained mind will have a sharp eye for the relevant factors while zealously excluding all that is irrelevant; and it will arrange the relevant factors according to weight. For instance, in voting during a presidential election our citizen should consider whether the candidate has sound policies, whether he has the ability to get on with Congress, whether he has a good grasp of international relations, and, in these troubled times, whether he has an understanding of military strategy. These are some of the factors which are relevant to the problem in hand. But the looks of the candidate most probably, and his religious denomination surely, are irrelevant. Prejudice brings in irrelevancies and logic should keep them out.

Effective thinking, while starting with logic, goes further so as to include certain broad mental skills. Thus an effective thinker is a man who can handle terms and concepts with skill and yet does not confuse words with things; he is empirical in the widest sense of the word, looking outward to nature. He is not satisfied merely with noting the facts, but his mind ever soars to implications. He knows when he knows and when he does not; he does not mistake opinion for knowledge. Furthermore, effective thinking includes the understanding of complex and fluid situations, in dealing with which logical methods are inadequate as mental tools. Of course thinking must never violate the laws of logic, but it may use techniques beyond those of exact mathematical reasoning. In the fields of the social studies and history, and in the problems of daily life, there are large areas where evidence is incomplete and may never be completed. Sometimes the evidence may be also untrustworthy; but, if the situation is practical, a decision must be made. The scientist has been habituated to deal with properties which can be abstracted from their total background and with variables which are few and well defined. Consequently, where the facts are unique and unpredictable, where the variables are numerous and their interactions too complicated for precise calculation, the scientist is apt to throw up his hands in despair and perhaps turn the situation over to the sentimentalist or the mystic. But surely he would be wrong in so doing; for the methods of logical thinking do not

exhaust the resources of reason. In coping with complex and fluid situations we need thinking which is relational and which searches for cross bearings between areas; this is thinking in a context. By its use it is possible to reach an understanding of historical and social materials and of human relations, although not with the same degree of precision as in the case of simpler materials and of recurring events. As Aristotle says, "It is the mark of an educated man to expect no more exactness than the subject permits."

A further element in effective thinking is the imagination, by which we mean whatever is distinctive in the thinking of the poet. Logical thinking is straight, as opposed to crooked, thinking; and that of the poet may be described as curved thinking. Where the scientist operates with abstract conceptions the poet employs sensuous images; imagination is the faculty of thinking in terms of concrete ideas and symbols. Instead of reading a prosaic analysis of exuberant vitality, we may get a direct vision of it in Manet's portrait of the boy with the flute. We may study human nature in the psychologist's abstract accounts of it, or we may see it in the vivid presentations of imagined individuals like Othello, Becky Sharp, Ulysses, and Anna Karenina. The reader might demur that imagination has little to do with effective thinking. Yet the imagination is most valuable in the field of human relations. Statistics are useful, but statistics alone will not carry us very far in the understanding of human beings. We need an imagination delicately sensitive to the hopes and the fears, the qualities and the flaws of our fellow man, and which can evoke a total personality in its concrete fullness. In practical matters, imagination supplies the ability to break with habit and routine, to see beyond the obvious and to envisage new alternatives; it is the spur of the inventor and the revolutionary, no less than of the artist.

It may be noted that the three phases of effective thinking, logical, relational, and imaginative, correspond roughly to the three divisions of learning, the natural sciences, the social studies, and the humanities, respectively.

Communication—the ability to express oneself so as to be understood by others—is obviously inseparable from effective thinking. In most thinking, one is talking to oneself; and good speech and writing are the visible test and sign of good thinking. Conversely, to speak clearly one must have clear ideas. You cannot say something unless you have something to say; but in order to express your ideas properly you also need some skill in communication. There is something else too: the honest intent to make your ideas known, as against the desire to deceive or merely to conceal. Communication is not speaking only but listening as well; you cannot succeed in communicating your ideas unless the other person wishes to hear and knows how to listen. As there are two kinds of language, oral and written, communication

breaks up into the four related skills of speaking and listening, writing and reading.

Communication is that unrestricted exchange of ideas within the body politic by which a prosperous intellectual economy is secured. In its character as the sharing of meanings it is the instrument by which human beings are welded into a society, both the living with the living and the living with the dead. In a free and democratic society the art of communication has a special importance. A totalitarian state can obtain consent by force; but a democracy must persuade, and persuasion is through speech, oral or other. In a democracy issues are aired, talked out of existence or talked into solution. Failure of communication between the citizens, or between the government and the public, means a breakdown in the democratic process. Nevertheless, whereas people have been brought together nearer than ever before, in a physical sense, by the improvement of mechanisms of transportation, it cannot be said that mutual understanding among individuals and among peoples has made a corresponding advance. Skills, crafts, professions, and scholarly disciplines are apt to surround themselves by high walls of esoteric jargon. Other barriers are erected through the tendency to convert communication into propaganda, whether it be political propaganda, or economic propaganda, as for instance in some types of advertising. Thus, effective communication depends on the possession not only of skills such as clear thinking and cogent expression but of moral qualities as well, such as candor.

In older days, a course on rhetoric was a normal part of the curriculum. Rhetoric to us suggests oratory, and today we are suspicious of or at least indifferent to oratory. Yet the art of rhetoric meant the simple skill of making one's ideas clear and cogent; it did not necessarily mean high-flown speeches. The simplest example of communication is conversation. It is a truism to say that conversation is a lost art. The question is, where was it lost? If we carry on less, or less good, conversation than our ancestors did, is it because we have lost the art, or because, having become technicians, we have little to say that is suitable for general conversation, or because we are much more interested in doing things—driving, for example, or playing bridge? Learned persons are apt to disparage conversation as trivial or frivolous, but unjustly so. If you are looking for the uncovering of important truths during a dinner party, of course you may be disappointed; but that is because you will be looking for the wrong thing. The contribution of general conversation is the revelation and impact of personality. While nothings are being bandied about and trivial words, like the lightest balloons, are launched into the air, contact with personalities is being achieved through characteristic inflections and emphases, through readiness or shyness of re-

sponse. In conversation the idea is inseparable from the man; conversation is useful because it is the most unforced and natural means of bringing persons together into a society. Beyond its social function, conversation is a delight in itself. It is an art, yet it loses its value if it becomes artificial. Its essence is spontaneity, impetus, movement; the words of a conversation are evanescent, things of the moment, while written words are formalized, rigid, and fixed. Starting with simple things like the weather and minor personal happenings, it proceeds to weave a pattern of sentiments and ideas, and through these of persons, which is fugitive just because it is alive.

Perhaps we have wandered too far from the serious—or should we say the ponderous—aspects of our problem. Yet we had a point to make: that language needs to be neither high learning nor high literature in order to be communication. What we have in mind is the language of a businessman writing a plain and crisp letter, of a scientist making a report, of a citizen asking straight questions, of human beings arguing together on some matter of common interest.

The *making of relevant judgments* involves the ability of the student to bring to bear the whole range of ideas upon the area of experience. It is not now a question of apprehending more relationships within ideas but of applying these to actual facts. The most competent instructor of military science is not necessarily the best officer in the field. An adequate theory of ball playing is conceivable, but an abstract knowledge of it would not make a good ballplayer any more than a course on poetics, however good, would make a good poet. It is not the power to distinguish or state the universal formula, for separated contemplation, which heightens our skill. It is the power to use the formula in the new concrete situations as they fleet past us which education aims to advance. In Plato's myth the philosopher who has obtained the vision of the good must return to the cave and use his vision in order to guide himself among the shadows. Initially and inevitably he is confused; only after long habituation is he able to find his way around and properly to apply his concepts to his concrete experience. There is no rule to be learned which could tell the student how to apply rules to cases; the translation from theory to practice involves an art all its own and requires the skill which we call sagacity or judgment.

To some degree every school or college is separated from life by high walls, visible or invisible; it holds reality at arm's length. And up to a point this is necessary and proper. While it is true that the present is our only fact, nevertheless we cannot see the present so long as we are immersed in it; we need the perspective afforded by distance in time and in space. One of the aims of education is to break the stranglehold of the present upon the mind.

TRAITS OF MIND

On the other side is the fact that youth is instinctive and ardent; to subject youth to a steady diet of abstractions alone would be cruel and unnatural. Moreover, abstractions in themselves are meaningless unless connected with experience; and for this reason all education is in some sense premature. The adult who rereads his great authors realizes how much he had missed of their meaning when he read them in school or college. Now his reading is more rewarding because his range of experience is greater. One might conceive fancifully of another scheme of life in which work comes first and education begins later, say at forty-five. The advantages of this scheme are obvious. Not only would the mature student be amply equipped with the depth of experience necessary for the understanding of the great authors, but the financial problem would be solved. The student would have saved enough money from his work, or perhaps his children would support him.

But such utopias are not for us; we have to deal with harsh realities. Education must be so contrived that the young, during the very process of their schooling, will realize the difference between abstractions and facts and will learn to make the transition from thought to action. A young man who has been nourished with ideas exclusively will be tempted by the sin of intellectual pride, thinking himself capable of dealing with any problem, independently of experience. When he later comes into contact with things, he will stumble or perhaps in self-defense withdraw into sterile cleverness. As we have seen, the aptitude of making relevant judgments cannot be developed by theoretical teaching; being an art, it comes from example, practice, and habituation. The teacher can do a great deal nonetheless; he can relate theoretical content to the student's life at every feasible point, and he can deliberately simulate in the classroom situations from life. Finally, he can bring concrete reports of actual cases for discussion with the students. The essential thing is that the teacher should be constantly aware of the ultimate objectives, never letting means obscure ends, and be persistent in directing the attention of the student from the symbols to the things they symbolize.

Discrimination among values involves choice. The ability to discriminate in choosing covers not only awareness of different kinds of value but of their relations, including a sense of relative importance and of the mutual dependence of means and ends. It covers also much that is analogous to method in thinking; for example, the power to distinguish values truly known from values received only from opinion and therefore not in the same way part of the fabric of experience. Values are of many kinds. There are the obvious values of character, like fair play, courage, self-control, the impulse of beneficence and humanity; there are the intellectual values, like the love of truth and the respect for the intellectual enterprise in all its forms; there are the

aesthetic values, like good taste and the appreciation of beauty. As for the last, people are apt to locate beauty in picture galleries and in museums and to leave it there; it is equally, if not more, important to seek beauty in ordinary things, so that it may surround one's life like an atmosphere.

Add to all this that the objective of education is not just knowledge of values but commitment to them, the embodiment of the ideal in one's actions, feelings, and thoughts, no less than an intellectual grasp of the ideal. The reader may object that we are proposing a confusion, that we are suggesting the turning of school or college into a moral reformatory or a church. For is not the purpose of educational institutions to train the mind and the mind only? Yet it is not easy, indeed it is impossible, to separate effective thinking from character. An essential factor in the advancement of knowledge is intellectual integrity, the suppression of all wishful thinking and the strictest regard for the claims of evidence. The universal community of educated men is a fellowship of ideals as well as of beliefs. To isolate the activity of thinking from the morals of thinking is to make sophists of the young and to encourage them to argue for the sake of personal victory rather than of the truth. We are not so naïve as to suggest that theoretical instruction in the virtues will automatically make a student virtuous. Rather, we assert that the best way to infect the student with the zest for intellectual integrity is to put him near a teacher who is himself selflessly devoted to the truth; so that a spark from the teacher will, so to speak, leap across the desk into the classroom, kindling within the student the flame of intellectual integrity, which will thereafter sustain itself.

The problem of moral values and character is more complex. Here the college does not play quite the same role as the school. Clearly we have a right to expect the school to be engaged directly in moral education. But although the college shares in this responsibility, it cannot be expected to use the same direct approach. The college will have to confine itself to providing a proper discrimination of values and will trust to the Socratic dictum that the knowledge of the good will lead to a commitment to the good. Nevertheless, we must recognize a difference between the responsibility of both school and college to train the intellect and their responsibility to form character. In some sense, the former responsibility is a unique one for the educational institution. But in the sphere of moral instruction the school shares its responsibilities with numerous other institutions, of which the family is the most important. Moreover, the school's responsibility is less than that of the family in this field. To use an earlier figure there is danger in regarding the school as a modern Atlas to whom is entrusted the bearing of the whole task of the formation of man. To change the metaphor, a wise society does not

put all its eggs in one basket. By the same token, the school cannot remain uninterested in the task of moral education. Just as liberal education, while strictly liberal, must somehow be oriented toward vocationalism, so in this general way will school and college be oriented toward moral character.

Discrimination in values is developed by the study of all the three areas of learning. We have seen that the humanities point both to moral and to aesthetic values. It may be true, as we have said earlier, that ethical neutrality is a guiding rule for the historian as scholar. Nevertheless, the historian or social scientist, as *teacher*, should probably go further and present to the student the human past and human institutions not merely as facts but as attempted embodiments of the good life in its various phases. In the natural sciences facts are studied in abstraction from values. But this separation, while pragmatically valid, leads to disaster if treated as final. Values are rooted in facts; and human ideals are somehow a part of nature.

LEARNING FOR LIVING OR EARNING?¹

Ordway Tead

THE demand of citizens in general and of parents in particular that the education of our children shall equip them to do something in a vocational way is present and increasing. It is confined neither to any class in society nor to any section of our country. It is, I believe, a normal demand, usually shared by the young people themselves, that at whatever point their formal education ceases they be qualified to enter some fairly specific employment which is consonant with the educational level at which they are leaving school.

In response to this demand and this sense of need, the American educational system in the past fifty years has developed with a commendable power of adaptation, even if the results are now somewhat confused. New types of institutions have multiplied to an amazing extent. How wise and how valuable all this has been, it is part of the purpose of this paper to consider.

I am myself convinced that the time is past due to restate our American educational aims with special reference to a wiser integration of the vocational facet of those aims with our total hopes, and decide what practical alterations should ensue in the methods in all of our existing institutions and in such other new ones as we may decide are needed to fill out our program.

¹Reprinted by permission of the author from *The Saturday Review of Literature*, September 15, 1945.

Our kind of society—a democratic society—needs from *all* its oncoming youth nothing less than the cultivation of such capacities as the following: to know how to think logically and soundly and therefore how to attack problems in that analytical way which leads to productive conclusions; to know how to communicate accurately both in oral and in written speech; to know how to appreciate what we speak of as the world of art sensitively and with some discrimination as to relative esthetic values; to know how to deal with people in personal relationships which will be deft, considerate, and friendly, and to be able also to mingle in necessary group associations amiably and to assume, as the occasion may offer, the responsibility of democratic leadership or the alertness of democratic followership; to know how to gain understanding of the workings of the natural world and of those procedures spoken of as the scientific method by which our mastery of that world has been progressively assured; to know how to become aware realistically of the pervasive political and economic forces at work in contemporary society; to come to know what kinds of experience and standards have been found permanently valuable in human experience; to come to care deeply, to stand for and strive for such values as have been established; and last, but by no means least, to be able to fill with competence a useful position in the world of work.

Much this same view is the premise of the interesting Harvard study on "General Education in a Free Society," which sets forth as its objective in general education that students shall come "to think effectively, to communicate thought, to make relevant judgments, to discriminate among values."

If it be agreed that it is something like all this extensive prescription which we would like to be able to assume as the equipment of every adult in a democratic society, I submit that it requires reconsideration of the vocational aims and emphases at the several educational levels where they now seem to manifest a too great prominence.

Indeed, it is important to observe with respect to the above enumeration of educational objectives that many of them suggest and imply the development of skills and character traits which are valuable if not essential in a considerable fraction of the world's jobs. And if this be true—if the ability to attack problems, communicate clearly, to deal effectively with people, to know something of the scientific method, to know something of the permanent values in living—if all of this is a desirable common possession of human beings as workers irrespective of the job, we note the first vital point at which any sharp separation between so-called liberal and so-called vocational aims is less important and less clear than has often been assumed.

Another conventional way of stating this dichotomy has been to assume

that there are those citizens who qualify for liberal education and those who are more properly equipped for a practical or vocational education. How completely this misconceives the problem of education for a democratic society should in the light of the above begin to be clear. It is no longer possible to operate in a defensible way the whole program of secondary and college education until the inwardness of cultural or general and of vocational education is more clearly grasped and until the unifying elements as between the two are more widely acknowledged.

Something has therefore to be said about the true meaning of cultural or general education and of its necessary vocational accompaniments. And this involves deciding what cultural, liberal, or general education is; and it involves a clear picture of the vocational needs of our society as related to requisite educational preparation and to the actual distribution of human talents, capacities, and interests.

I shall assume (in line with the recent Harvard study just referred to) that general education wisely conceived is synonymous, at least potentially, with liberal or cultural education. It has no doubt been true that typically cultural education has been conceived and imparted both in terms of outlook and subject matter with a retrospective emphasis. It has been the best that was thought and said and done. Indeed, it was too often limited to influences in and heritages from the pre-industrial era.

More recently liberal education is happily being associated with culture in the sense that de Gasset uses the word in his "Mission of the University" where he says that, "it is the system of vital ideas which each age possesses; better yet, it is the system of ideas, by which the age lives." It is our "convictions as to the hierarchy of the value of things."

Only in recent years have we become clearly conscious of an American culture as such and become eager for the appreciation and imparting of the values which it embraces. And even here the emphasis has tended to be on our cultural characteristics as manifested prior to the twentieth century. From a cultural point of view we are only beginning to describe, to analyze, to evaluate that rapidly expanding part of our American life which is rooted in the production and distribution of goods and services and which is the resulting impact of technology and electric power upon our way of life. The fact that all this helps to constitute, qualify, and modify our culture, and that we are both illiterate about ourselves and our times and impotent to grapple with the social and psychic forces at work if we are without self-consciousness of this culture—that fact is slowly dawning on us, as affecting the content of cultural education.

The total consequence of the older retrospective view of culture has been

to make it a precious, thin, sublimated concern which equipped those thus educated with no ability to cope either in general terms of social controls or of individual occupations with the life into which they moved after leaving school or college. Indeed it all seemed to put a premium upon detachment, aloofness, and unrelatedness to the workaday world.

The important exception to this generalization was, of course, the value found in the typical liberal college curriculum as pre-professional training for the law, medicine, theology, and teaching. For these callings, colleges have always been prevocational training centers and have been so without apology, presumably because they comprise the aristocracy of employments toward which college instruction could be slanted without any taint of being too mundane, too practical, or too materialistic.

Meanwhile as the conventional liberal college stemming beyond the academic high school has kept studiously aloof from the world of work with the exceptions just noted, the pressure of demand and need has brought vocational education into great prominence and popularity at both the secondary and collegiate levels. The educational problem now in consequence needing to be faced is as to the *social effectiveness* of this vocational education as assuring the turning out of young people as well equipped as citizens and human beings as they are as workers.

A little acknowledged and even unwitting separation and segregation has arisen between those who after ten to thirteen years of school go out, often under economic pressure, to do the "humbler" parts of the world's work and those who go on for another term of years and secure the employments which entail greater social esteem and material reward. Perhaps it is inevitable that all this gives rise to a certain amount of social snobbery and class division which approaches class consciousness. But what is not inevitable and is highly undesirable is that the total education of *any* person should not have included in it as much of attention to liberal or general subject matter as is required to bring about a population of adults who are capable of being the responsible citizens of a democratic state.

It is thus important to look briefly, in the next place, at the vocations and jobs in our society. There is, of course, a hierarchy of employments from the point of view of the amount of intelligence, training, and special personal qualities which they require. We do not know whether the distribution of jobs in respect to the talent required corresponds to the familiar "bell-shaped curve" in which the distribution of intelligence (I.Q.) is usually depicted. But we do know that out of over 3000 occupations in the Dictionary of Occupations published by the U. S. Department of Labor, there is a wide spread as to the intelligence, the aptitudes, interests, and skills called for.

And we know too, with increasing clarity today, that for all employments, there is a body of what we cannot escape referring to as *character traits*, which we would like to assume that every applicant in the world of work possessed. These have to do with such matters as habits of promptness, thoroughness, alertness, concentration, ability to work with people, and adaptability. And it *may* be true that the proportion of positions requiring these general traits *primarily* is increasing, as the mechanizing trend progresses. And it may further be true that for a considerable fraction of industrial and mercantile jobs what the employer *should* want of newcomers at work is predominantly good character traits, to which by his own employer-supported training program he can add in a few weeks' time the specialized and applied skills his business peculiarly requires.

In short, an analytical view of the actual employment scene may (and I believe will) give the lie to the notion that an elaboration of narrow vocational instruction should be publicly offered to young people prior to around eighteen years of age, by which time they can have been adequately exposed to a flexible and attractive program of general education. Put in another way, some employers, and even parents and the young people themselves, are surely misconceiving what they ought to expect from public education before the eighteenth year.

The problem of kinds of work to be done matched against those who are to do it, needs equally realistic confronting at the college level. Testimony from business is clear that its demand for highly specialized business training in college is far less than is generally supposed. If we exclude the engineering schools and their technical training for engineering positions, what we actually find is that business in hiring college graduates is looking for potential managerial capacity. All this is not to deny the educational and social values of graduate courses in business, public service callings, and other semi-professional careers. It is rather to emphasize that a liberal arts course freshly conceived in relation to the interests of students and the present needs of society can have genuine vocational value (as it has already abundantly proved itself to have) without extending its instruction into areas of vocational techniques. In other words, there is needed a refusing and reuniting of educational objectives so that *every* student assuredly becomes the best total person he can be as of that age when he leaves school and becomes ready simultaneously to make a start at an employment which is consonant with his special abilities.

If now the view is accepted that a unifying of educational objectives, and to some extent of process, is sound and necessary as against the sharp separations of today, the question at once arises as to how the interplay of cultural

and vocational influences, interests, and emphases can be best assured. I see three levels at which the problem must be addressed: (1) in the restatement of educational objectives and policies by teacher-training institutions, school boards, and boards of trustees; (2) in the conscious interrelation of general and special courses in the curriculum of each student; and (3) in the unifying within each unit course of considerations of cultural and vocational reference.

The restatement of directives and policies is actually the over-all theme of this article. I am urging that we need agreement that a democracy has to afford a common core of general education for all its young people up to eighteen years of age designed to prepare them for family life, citizenship, and personal orientation, as well as for vocation, and that vocational education should enter in its appropriate place only when the general education is well on its way to its conclusion (as of the age level at which the young person is leaving school).

It is a specific condition of translating the thesis of this paper into operating actuality that it be subscribed to and taught by teachers' colleges and be propagated for by educational leaders generally. Reviewing and reshaping educational objectives is the Number One task.

Second, we come to the interrelationship to be attained between general and special course offerings in the curriculum of each individual school and student. This comes down in part to pedagogical method, but it is nonetheless important for that. Concretely, the teachers of the humanities, the social studies, and the natural sciences have the duty of occasionally orienting their subject matter to its vocational possibilities. A secondary aim for all teachers is to convey a sense of "how my course relates to the world of work, how it is used there, where its matter has application there." I submit that the teacher of every subject can usefully now and again remind the class that his subject matter does have vocational meaning in *some* direction. I do not say that every general course has, obviously and directly, to justify itself vocationally, or have obvious vocational contexts. But if it is wise to include a given course in the curriculum the chances are excellent that in one way or another it impinges upon our operating economy and dominant culture, and that relationship can profitably be made explicit.

An equally important facet of all general instruction is that the *by-products* of good learning should be consciously striven for. Lucid expression, adequacy of communication—these should be aims of *every* course. Critical appraisal of facts, conscious use of a problem-solving method (the scientific method), elegance of execution, persistence in attack, thoroughness of effort, promptness, cheerfulness, friendliness in human dealings—all of these, I must insist, are rightful by-products of the study with every good teacher of every

subject. And they should be consciously held in view by every teacher as necessary and valuable aspects of the total learning experience going forward.

Conversely, the vocational teacher at his best at successive levels of secondary, college, or professional school, will explicitly orient the technical job into its total, social, functional, and cultural setting. Every vocation has its history, its science, its artistry, its great figures, its *rationale*—and increasingly its ethics. In short, it has its general bearings on life as a whole. All of this the student has a right to become aware of; and the teacher therefore has a duty of interpretation.

I repeat that the importance of college subjects is not primarily in relation to any narrow occupational usefulness that might be imputed to them. But *importance* is what every subject must be invested with by the teacher. And this is one of the several ways in which ideas are important, namely, because of some bearing they may have upon the significance of the world's work. In fact, far more existent cultural study has direct vocational value than professors usually appreciate. Already in much subject matter a breakdown of the barrier between cultural and vocational is beginning to occur, and it can occur more if educational counselors will give the right guidance on course selection to students and on course orientation to teachers.

This is not the place to offer details as to how the college teacher can gain in knowledge of the occupational relations of his subject. New techniques are being evolved here under the new sense of this need. One item, however, deserves emphasis, namely, the use of the vacation periods for study, visitation, interviews, and actual job getting and job holding efforts that are specifically designed to enlarge the teacher's first-hand knowledge of the relevancies of his subject to today's life. I know one institution where it is becoming a point of honor for professors to devote their sabbatical years to getting a paid job of a non-teaching nature and holding it satisfactorily, in some field related to their major competence. Need it be emphasized that the freshness of attack on subject matter which such teachers are destined to bring back to their classes is greatly to be desired?

Similarly, with vocational teachers at the college level, as in engineering and business courses, they have to be as concerned with the why as with the what, with the problem of values as with the problems of operation, with issues of social control of techniques and of scientific advances. Vocational teachers are sending students directly both into corporations and into the professional world. What of standards of ethical practice? What of the place and fruition of vocational associations and worker unions? What of the professional worker's status in a corporation whether as a paid hireling or as a responsible party to collective dealing with management?

COLLEGE

These are but a few of the issues which are part of the broader view of vocational instruction—calculated to assure that trained workers come through a kind of educational experience in which their personal and group relation to the management and ownership interests is sophisticated enough to lessen the chances of the grosser forms of exploitation being practised upon them. If, as I believe, we are actually (and in part legally) building up within our economic life something which may with some accuracy be referred to as a constitutional economic government, it will be essential that the presumptive citizens of that government know how to conduct themselves as such—in respect to responsibilities no less than rights. Thus far vocational as well as general education has soft-pedaled a confronting of this whole delicate but dynamic area. In short; vocational teachers at all levels have in the future to surround and support the training they offer with a realistic grasp of the total *milieu* in which the work for which they train is to take place. And that realism has to include a democratic bias in all its economic implications.

The conclusion to which this analysis comes is that the breach between general and vocational education has to be greatly narrowed.

Vocational education in the narrow, specialized sense should not be commenced until a foundation in a socially oriented general education is assured for *all* young people. And when such vocational education is begun, it should not, until the top reaches of professional study are undertaken, be dissociated from some continuing exposure to general subjects keyed to the maturing intellectual interests.

Teachers both general and vocational have likewise to see their tasks as more nearly identical than is now typically the case. The teacher of liberal arts has to know the contemporary world better. And the teacher of vocational subjects has to be culturally more richly grounded.

The unified and over-all objective of educating whole persons has to be restored to centrality, both in the training of teachers and the shaping of educational policy by those responsible for curriculum building.

We will get good workers for our kind of society only as we qualify all our youth to enter that society as persons and citizens no less than as prospective job holders.

Vocations and Professions

THE WAY TO WEALTH • BENJAMIN FRANKLIN

HAPPY; LABOUR • THOMAS CARLYLE

WHAT ARE YOU FIT FOR? • WILLIAM SEABROOK

THE DECLINE OF THE PROFESSIONS • HAROLD J. LASKI

VOCABULARY AND SUCCESS • JOHNSON O'CONNOR

THE WAY TO WEALTH¹

Benjamin Franklin

IT would be thought a hard Government that should tax its People one tenth Part of their *Time*, to be employed in its Service. But *Idleness* taxes many of us much more, if we reckon all that is spent in absolute *Sloth*, or doing of nothing, with that which is spent in idle Employments or Amusements, that amount to nothing. *Sloth*, by bringing on Diseases, absolutely shortens Life. *Sloth, like Rust, consumes faster than Labour wears, while the used Key is always bright*, as *Poor Richard* says. But *dost thou love Life, then do not squander Time, for that's the Stuff Life is made of*, as *Poor Richard* says.—How much more than is necessary do we spend in Sleep! forgetting that *The Sleeping Fox catches no Poultry*, and that *there will be sleeping enough in the Grave*, as *Poor Richard* says. If Time be of all Things the most precious, *wasting of Time* must be, as *Poor Richard* says, *the greatest Prodigality*, since, as he elsewhere tells us, *Lost Time is never found again*; and what we call *Time-enough, always proves little enough*. Let us then be up and doing, and doing to the Purpose; so by Diligence shall we do more with less Perplexity. *Sloth makes all things difficult, but Industry all Things easy*, as *Poor Richard* says; and *He that riseth late, must trot all Day, and shall scarce overtake his Business at night*. While *Laziness travels so slowly, that Poverty soon overtakes him*, as we read in *Poor Richard*, who adds, *Drive thy Business, let not that drive thee; and, Early to Bed, and early to rise, makes a Man healthy, wealthy, and wise*.

So what signifies *wishing* and *hoping* for better times. We may make these Times better if we bestir ourselves. *Industry need not wish* as *Poor Richard* says, and *He that lives upon Hope will die fasting*. *There are no Gains, without Pains*; then *Help Hands, for I have no Lands*, or if I have, they are smartly taxed. And as *Poor Richard* likewise observes, *He that hath a Trade hath an Estate*, and *He that hath a Calling hath an Office of Profit and Honour*; but then the *Trade* must be worked at, and the *Calling* well followed, or neither the *Estate*, nor the *Office*, will enable us to pay our Taxes.—If we are industrious we shall never starve; for as *Poor Richard* says, *At the working Man's House Hunger looks in, but dares not enter*. Nor will the Bailiff or the Constable enter, for *Industry pays Debts while Despair encreaseth them*, says *Poor Richard*.—What though you have found no Treasure, nor has any rich Relation left you a Legacy; *Diligence is the Mother of Good-luck*, as *Poor Richard* says, and *God gives all things to Industry*. Then plough

¹From "Father Abraham's Speech," forming the preface to *Poor Richard's Almanac* for 1758.

deep, while Sluggards sleep, and you shall have Corn to sell and to keep, says Poor Dick. Work while it is called To-day, for you know not how much you may be hindered To-morrow, which makes Poor Richard say, One To-day is worth two To-morrows; and farther, Have you somewhat to do To-morrow, do it To-day. If you were a Servant, would you not be ashamed that a good Master should catch you idle? Are you then your own Master, be ashamed to catch yourself idle, as Poor Dick says. When there is so much to be done for yourself, your Family, your Country, and your gracious King, be up by Peep of Day; Let not the Sun look down and say, Inglorious here he lies. Handle your Tools without Mittens; remember that the Cat in Gloves catches no Mice, as Poor Richard says. 'Tis true there is much to be done, and perhaps you are weak-handed, but stick to it steadily, and you will see great Effects, for constant Dropping wears away Stones, and by Diligence and Patience, the Mouse ate in two the Cable; and little Strokes fell great Oaks, as Poor Richard says in his Almanack, the Year I cannot just now remember.

Methinks I hear some of you say, *Must a Man afford himself no Leisure?* —I will tell thee My Friend, what *Poor Richard* says, *Employ thy Time well if thou meanest to gain Leisure; and, since thou art not sure of a Minute, throw not away an Hour.* Leisure is Time for doing something useful; this Leisure the diligent man will obtain, but the lazy man never; so that, as *Poor Richard* says, *a Life of leisure and a Life of Laziness are two Things.* Do you imagine that Sloth will afford you more comfort than Labour? No, for as *Poor Richard* says, *Trouble springs from Idleness, and grievous Toil from needless Ease. Many without Labour, would live by their WITS only, but they break for want of stock.* Whereas Industry gives Comfort, and Plenty and Respect: *Fly Pleasures and they'll follow you. The diligent Spinner has a large Shift; and now I have a Sheep and a Cow every Body bids me Good morrow, all which is well said by Poor Richard.*

But with our Industry, we must likewise be *steady, settled, and careful,* and oversee our own Affairs *with our own Eyes,* and not trust too much to others; for, as *Poor Richard* says,

*I never saw an oft removed Tree,
Nor yet an oft removed Family,
That throve so well as those that settled be.*

And again, *Three Removes is as bad as a Fire;* and again, *Keep thy Shop, and thy Shop will keep thee;* and again, *If you would have your Business done, go; if not, send.* And again,

*He that by the Plough would thrive,
Himself must either hold or drive.*

And again, *The Eye of a Master will do more Work than both his Hands*; and again, *Want of Care does us more Damage than Want of Knowledge*; and again, *Not to oversee Workmen, is to leave them your Purse open*. Trusting too much to others' Care is the Ruin of many; for, as the *Almanack* says, *In the Affairs of this World, Men are saved, not by Faith, but by the Want of it*; but a Man's own Care is profitable; for, saith *Poor Dick*, *Learning is to the Studious, and Riches to the Careful, as well as Power to the Bold, and Heaven to the Virtuous*. And, farther, *If you would have a faithful Servant, and one that you like, serve yourself*. And again, he adviseth to Circumspection and Care, even in the smallest Matters, because sometimes, *a little Neglect may breed great Mischief, adding for want of a Nail, the Shoe was lost; for want of a Shoe the Horse was lost; and for want of a Horse the Rider was lost*, being overtaken and slain by the Enemy; all for want of Care about a Horse-shoe Nail.

So much for Industry, my Friends, and Attention to one's own Business; but to these we must add *Frugality*, if we would make our *Industry* more certainly successful. A man may, if he knows not how to save as he gets, *Keep his Nose all his Life to the Grindstone*, and die not worth a *Groat* at last. *A fat Kitchen makes a lean Will, as Poor Richard says; and*

*Many Estates are spent in the Getting,
Since Women for Tea forsook Spinning and Knitting,
And Men for Punch forsook Hewing and Splitting.*

If you would be wealthy, says he, in another *Almanack*, *think of Saving as well as of Getting: The Indies have not made Spain rich, because her Outgoes are greater than her Incomes*. Away then with your expensive Follies, you will not have so much cause to complain of hard Times, heavy Taxes, and chargeable Families; for, as *Poor Dick* says,

*Women and Wine, Game and Deceit,
Make the Wealth small, and the Wants great.*

And farther, *What maintains one Vice would bring up two Children*. You may think, perhaps, that a *little* Tea or a *little* Punch now and then, Diet a *little* more costly, Clothes a *little* finer, and a *little* Entertainment now and then, can be no great Matter: but remember what *Poor Richard* says, *Many a Little makes a Mickle*; and farther, *Beware of little Expenses; a small Leak will sink a great Ship*; and again, *Who Dainties love shall Beggars prove*; and moreover, *Fools make Feasts and wise Men eat them*.

Here you are all got together at this Vendue of *fineries* and *Knickknacks*. You call them *Goods*, but if you do not take Care, they will prove *Evils* to

some of you. You expect they will be sold *cheap*, and perhaps they may for less than they cost; but if you have no Occasion for them, they must be *dear* to you. Remember what *Poor Richard* says, *Buy what thou hast no Need of, and ere long thou shalt sell thy Necessaries*. And again, *At a great Pennyworth pause a while*: He means, that perhaps the Cheapness is *apparent* only, and not *real*; or the Bargain, by straitning thee in thy Business, may do thee more Harm than Good. For in another Place he says, *Many have been ruined by buying good Pennyworths*. Again *Poor Richard* says, *'Tis foolish to lay out Money in a Purchase of Repentance*; and yet this Folly is practised every Day at Vendues, for want of minding the Almanack. *Wise Men*, as *Poor Dick* says, *learn by others' Harms, Fools scarcely by their own*; but *Felix quem faciunt aliena Pericula cautum*. Many a one, for the Sake of Finery on the Back, have gone with a hungry Belly, and half starved their Families; *Silks and Satins, Scarlet and Velvets*, as *Poor Richard* says, *put out the Kitchen Fire*. These are not the *Necessaries* of Life; they can scarcely be called the *Conveniences*, and yet only because they look pretty, how many *want* to have them. The *artificial* Wants of Mankind thus become more numerous than the *natural*; and as *Poor Dick* says, *For one poor Person there are an hundred indigent*. By these, and other Extravagancies the Genteel are reduced to Poverty, and forced to borrow of those whom they formerly despised, but who through *Industry* and *Frugality*, have maintained their Standing; in which case it appears plainly that a Ploughman on his Legs is higher than a Gentleman on his Knees, as *Poor Richard* says. Perhaps they have had a small Estate left them, which they knew not the Getting of,—they think *'tis Day and will never be Night*; that a little to be spent out of *so much*, is not worth minding; (*a Child and a Fool*, as *Poor Richard* says, *imagine Twenty Shillings and Twenty Years can never be spent*) but, *always taking out of the meat-tub and never putting in, soon comes to the Bottom*; then, as *Poor Dick* says, *When the Well's dry, they know the Worth of Water*. But this they might have known before, if they had taken his Advice; *If you would know the Value of Money, go and try to borrow some; for he that goes a borrowing goes a sorrowing*; and, indeed, so does he that lends to such People, when he goes to get it in again.—*Poor Dick* farther advises, and says,

*Fond Pride of Dress is sure a very Curse;
Ere Fancy you consult, consult your Purse.*

And again, *Pride is as loud a Beggar as Want, and a great deal more saucy*. When you have bought one fine Thing you must buy ten more, that your appearance may be all of a Piece; but *Poor Dick* says, *'Tis easier to suppress*

the first Desire, than to satisfy all that follow it. And 'tis as truly Folly for the Poor to ape the Rich, as for the Frog to swell, in order to equal the Ox.

*Great Estates may venture more,
But little Boats should keep near Shore.*

'Tis, however, a Folly soon punished; for, *Pride that dines on Vanity sups on Contempt*, as *Poor Richard* says. And in another Place, *Pride breakfasted with Plenty, dined with Poverty, and supped with Infamy*. And after all, of what Use is this *Pride of Appearance*, for which so much is risked, so much is suffered! It cannot promote Health, or ease Pain; it makes no Increase of Merit in the Person, creates Envy, it hastens Misfortune.

*What is a Butterfly? At best
He's but a Caterpillar drest.
The gaudy Fop's his Picture just.*

as *Poor Richard* says.

But what Madness must it be to *run in Debt* for these Superfluities! We are offered by the Terms of this Vendue Six Months' Credit; and that perhaps has induced some of us to attend it, because we cannot spare the ready Money, and hope now to be fine without it. But, ah, think what you do when you run in Debt; *You give to another Power over your Liberty*. If you cannot pay at the Time, you will be ashamed to see your Creditor; you will be in Fear when you speak to him; you will make poor, pitiful, sneaking Excuses, and by Degrees come to lose your Veracity, and sink into base, downright lying; for as *Poor Richard* says, *The second Vice is Lying, the first is running in Debt*. And again, to the same Purpose, *Lying rides upon Debt's Back*; whereas a freeborn *Englishman* ought not to be ashamed or afraid to see or speak to any Man living. But Poverty often deprives a man of all Spirit and Virtue; *'Tis hard for an empty Bag to stand upright*, as *Poor Richard* truly says. What would you think of that Prince, or that Government, who should issue an Edict forbidding you to dress like a Gentleman or a Gentlewoman, on Pain of Imprisonment or Servitude! Would you not say, that you are free, have a Right to dress as you please, and that such an Edict would be a Breach of your Privileges, and such a Government tyrannical! And yet you are about to put yourself under that Tyranny when you run in Debt for such Dress! Your Creditor has Authority at his Pleasure to deprive you of your Liberty by confining you in Gaol for Life, or to sell you for a Servant, if you should not be able to pay him! When you have got your Bargain, you may, perhaps, think little of Payment! But, *Creditors*, *Poor Richard* tells us, *have better*

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Memories than Debtors; and in another Place says, *Creditors are a superstitious Sect, great Observers of set Days and Times*. The Day comes round before you are aware, and the Demand is made before you are prepared to satisfy it, Or if you bear your Debt in Mind, the Term, which at first seemed so long, will, as it lessens, appear extremely short. Time will seem to have added Wings to his Heels as well as Shoulders. *Those have a short Lent*, saith *Poor Richard*, *who owe Money to be paid at Easter*. Then, since as he says, *The Borrower is a Slave to the Lender, and the Debtor to the Creditor*, disdain the Chain, preserve your Freedom; and maintain your Independency; Be *industrious* and *free*; be *frugal* and *free*. At present, perhaps, you may think yourself in thriving Circumstances, and that you can bear a little Extravagance without Injury; but

*For Age and Want save while you may;
No Morning Sun lasts a whole Day,*

as *Poor Richard* says.—Gain may be temporary and uncertain, but ever while you live Expense is constant and certain; and *'tis easier to build two Chimnies than to keep one in Fuel*, as *Poor Richard* says. So rather go to Bed supperless than rise in Debt.

*Get what you can, and what you get hold.
'Tis the stone that will turn all your Lead into Gold,*

as *Poor Richard* says. And when you have got the Philosopher's Stone, sure you will no longer complain of the bad Times or the Difficulty of paying Taxes.

This Doctrine, my Friends, is *Reason* and *Wisdom*; but after all, do not depend too much on your own *Industry* and *Frugality*, and *Prudence*, though excellent Things; for they may all be blasted without the Blessing of Heaven; and therefore ask that Blessing humbly, and be not uncharitable to those that at present seem to want it, but comfort and help them, Remember *Job* suffered, and was afterwards prosperous.

And now, to conclude, *Experience keeps a dear School*, but *Fools will learn in no other, and scarce in that*; for it is true, *we may give Advice, but we cannot give Conduct*, as *Poor Richard* says: However, remember this, *They that won't be counselled, can't be helped*, as *Poor Richard* says: and farther, *That if you will not hear Reason, she'll surely wrap your Knuckles*.

HAPPY¹

Thomas Carlyle

ALL WORK, even cotton-spinning, is noble; work is alone noble: be that here said and asserted once more. And in like manner too, all dignity is painful; a life of ease is not for any man, nor for any god. The life of all gods figures itself to us as a Sublime Sadness,—earnestness of Infinite Battle against Infinite Labour. Our highest religion is named the 'Worship of Sorrow.' For the son of man there is no noble crown, well worn or even ill worn, but is a crown of thorns!—These things, in spoken words, or still better, in felt instincts alive in every heart, were once well known.

Does not the whole wretchedness, the whole *Atheism* as I call it, of man's ways, in these generations, shadow itself for us in that unspeakable Life-philosophy of his: The pretension to be what he calls 'happy'? Every pitifullest whipster that walks within a skin has his head filled with the notion that he is, shall be, or by all human and divine laws ought to be 'happy.' His wishes, the pitifullest whipster's, are to be fulfilled for him; his days, the pitifullest whipster's, are to flow on in ever-gentle current of enjoyment, impossible even for the gods. The prophets preach to us, Thou shalt be happy; thou shalt love pleasant things, and find them. The people clamour, Why have we not found pleasant things?

We construct our theory of Human Duties, not on any Greatest-Nobleness Principle, never so mistaken; no, but on a Greatest-Happiness Principle. 'The word *Soul* with us, as in some Slavonic dialects, seems to be synonymous with *Stomach*.' We plead and speak, in our Parliaments and elsewhere, not as from the Soul, but from the Stomach;—wherefore indeed our pleadings are so slow to profit. We plead not for God's Justice; we are not ashamed to stand clamouring and pleading for our own 'interests,' our own rents and trade-profits; we say, They are the 'interests' of so many; there is such an intense desire in us for them! We demand Free-trade, with much just vociferation and benevolence, That the poorer classes, who are terribly ill-off at present, may have cheaper New-Orleans bacon. Men ask on Free-trade platforms, How can the indomitable spirit of Englishmen be kept up without plenty of bacon? We shall become a ruined Nation!—Surely, my friends, plenty of bacon is good and indispensable: but, I doubt, you will never get even bacon by aiming only at that. You are men, not animals of prey, well-used or ill-used! Your Greatest-Happiness Principle seems to me fast becoming a rather unhappy one.—What if we should cease babbling about 'happiness,' and leave it resting on its own basis, as it used to do!

¹This selection and "Labour," which follows, are from Carlyle's *Past and Present*, 1843.

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A gifted Byron rises in his wrath; and feeling too surely that he for his part is not 'happy,' declares the same in very violent language, as a piece of news that may be interesting. It evidently has surprised him much. One dislikes to see a man and poet reduced to proclaim on the streets such tidings: but on the whole, as matters go, that is not the most dislikable. Byron speaks the *truth* in this matter. Byron's large audience indicates how true it is felt to be.

'Happy,' my brother? First of all, what difference is it whether thou art happy or not! Today becomes Yesterday so fast, all Tomorrows become Yesterdays; and then there is no question whatever of the 'happiness,' but quite another question. Nay, thou hast such a sacred pity left at least for thyself, thy very pains once gone over into Yesterday become joys to thee. Besides, thou knowest not what heavenly blessedness and indispensable sanative virtue was in them; thou shalt only know it after many days, when thou art wiser!

LABOUR

FOR there is a perennial nobleness, and even sacredness, in Work. Were he never so benighted, forgetful of his high calling, there is always hope in a man that actually and earnestly works: in Idleness alone is there perpetual despair. Work, never so Mammonish, mean, *is* in communication with Nature; the real desire to get Work done will itself lead one more and more to truth, to Nature's appointments and regulations, which are truth.

The latest Gospel in this world is, Know thy work and do it. 'Know thyself': long enough has that poor 'self' of thine tormented thee; thou wilt never get to 'know' it, I believe! Think it not thy business, this of knowing thyself; thou art an unknowable individual: know what thou canst work at; and work at it, like a Hercules! That will be thy better plan.

It has been written, 'an endless significance lies in Work'; a man perfects himself by working. Foul jungles are cleared away, fair seed-fields rise instead, and stately cities; and withal the man himself first ceases to be a jungle and foul unwholesome desert thereby. Consider how, even in the meanest sorts of Labour, the whole soul of a man is composed into a kind of real harmony, the instant he sets himself to work! Doubt, Desire, Sorrow, Remorse, Indignation, Despair itself, all these like helldogs lie beleaguering the soul of the poor dayworker, as of every man: but he bends himself with free valour against his task, and all these are stilled, all these shrink murmuring far off into their caves. The man is now a man. The blessed glow of Labour in him, is it not as purifying fire, wherein all poison is burnt up, and of sour smoke itself there is made bright blessed flame!

Destiny, on the whole, has no other way of cultivating us. A formless Chaos, once set it *revolving*, grows round and ever rounder; ranges itself, by mere force of gravity, into strata, spherical courses; is no longer a Chaos, but a round compacted World. What would become of the Earth, did she cease to revolve? In the poor old Earth, so long as she revolves, all inequalities, irregularities disperse themselves; all irregularities are incessantly becoming regular. Hast thou looked on the Potter's wheel,—one of the venerablest objects; old as the Prophet Ezechiel and far older? Rude lumps of clay, how they spin themselves up, by mere quick whirling, into beautiful circular dishes. And fancy the most assiduous Potter, but without his wheel; reduced to make dishes, or rather amorphous botches, by mere kneading and baking! Even such a Potter were Destiny, with a human soul that would rest and lie at ease, that would not work and spin! Of an idle unrevolving man the kindest Destiny, like the most assiduous Potter without wheel, can bake and knead nothing other than a botch; let her spend on him what expensive colouring, what gilding and enamelling she will, he is but a botch. Not a dish; no, a bulging, kneaded, crooked, shambling, squint-cornered, amorphous botch,—a mere enamelled vessel of dishonour! Let the idle think of this.

Blessed is he who has found his work; let him ask no other blessedness. He has a work, a life-purpose; he has found it, and will follow it! How, as a free-flowing channel, dug and torn by noble force through the sour mud-swamp of one's existence, like an ever-deepening river there, it runs and flows;—draining-off the sour festering water, gradually from the root of the remotest grass-blade; making, instead of pestilential swamp, a green fruitful meadow with its clear-flowing stream. How blessed for the meadow itself, let the stream and *its* value be great or small! Labour is Life: from the inmost heart of the Worker rises his god-given Force, the sacred celestial Life-essence breathed into him by Almighty God; from his inmost heart awakens him to all nobleness,—to all knowledge, 'self-knowledge' and much else, so soon as Work fitly begins. Knowledge? The knowledge that will hold good in working, cleave thou to that; for Nature herself accredits that, says Yea to that. Properly thou hast no other knowledge but what thou hast got by working: the rest is yet all a hypothesis of knowledge; a thing to be argued of in schools, a thing floating in the clouds, in endless logic-vortices, till we try it and fix it. 'Doubt, of whatever kind, can be ended by Action alone.'

WHAT ARE YOU FIT FOR?¹

William Seabrook

FIFTEEN years ago a now famous young Harvard psychologist named Johnson O'Connor began to test aptitudes and potential abilities in employees and applicants at General Electric. His work widened and has evolved into the Human Engineering Laboratory now located at Stevens Institute of Technology, Hoboken, New Jersey, with branches in Boston, Chicago, and Washington and field activities covering most of the United States.

The aim of the Laboratory is not vocational guidance but rather to give to a person, through a series of ingenious tests, a *conscious inventory of his natural aptitudes and potential capabilities*.

Dr. O'Connor likes to say, "We have only a little lantern in the dark," and, "Goodness, man, we don't pretend to predict an individual's future or settle his life for ten dollars in two hours!" He does feel, however, that the tests can always shed *some* definite light on inherent aptitude and that, by choosing work in accord with his natural aptitudes, the individual is more likely to be successful and happy.

These limited pretensions seemed so at variance with reports of astounding "successes" and "adjustments" engineered by O'Connor and his crew that I went to Hoboken to report on just what they have accomplished there.

Headquarters of Human Engineering Laboratory are located on the campus of Stevens Institute (one of the four ranking technological schools in America), which sprawls on heights overlooking the Hoboken waterfront, in an old converted brownstone mansion which hums all day long. Director O'Connor, still around forty, is smallish, dark, wiry, kinetic, pleasant, with a thick, black beard of the sort occasionally worn in the French Academy but seldom seen in America or on anybody named O'Connor anywhere. He is surrounded by a staff of sixteen men and women, mostly specialists from Yale, Columbia, Cornell, Wellesley, Smith, etc.

LEARNING ABOUT YOURSELF

No matter who you are, male or female, so long as you are nine years of age or older, you can go and take the tests, regardless of whether you are in a job, out of a job, bright or dumb. A fee ranging from \$10 to \$20 is charged but doesn't cover the actual cost of the testing.

Of the 20,000 persons they've tested here and in field work (about 70 per cent of whom they have definitely helped toward better adjustment), the first 13,000 were employees in industry, tested at the request of their employers; the

¹From *The Forum*, August, 1938.

subsequent 12,000 were about half adults and about half college students and school children.

The tests should work at all ages, because inherent aptitudes, if they exist at all, are basic and cannot be acquired. Whether these things are immutably fixed in the womb or on the nursery floor is outside their pragmatic province. What difference does it make, if there's nothing you can do about it afterward? They have succeeded up to now in isolating only ten testable inherent aptitudes, yet suspect there are probably 90 to 100 which may some day be discovered.

"We have paralleled thus far very closely the history of chemistry," O'Connor said. "Originally, fire, air, earth, and water were thought to be the chemical elements. It was not until chemists stumbled upon and isolated hydrogen, chlorine, oxygen, and carbon that it began to lead into a new science. I think we are just beginning to isolate some real mental elements. When we began trying to sift out the bright, mediocre, and the dull applicants for jobs, we presently found that there didn't seem to be any such thing as general intelligence or general aptitude. We began to discover a few basic, highly *specific* elements which some individuals had and some did not or had in different combinations—and that was the real beginning, just as the real beginning of chemistry began with the isolation of hydrogen, chlorine, etc. It required, I believe, nearly a hundred and fifty years to isolate the other chemical elements. It may require a hundred and fifty years to isolate all the mental elements.

"Despite scientific evidence to the contrary, most of us still think of men in terms of general intelligence. Even parents do not always recognize ability in their own children.

"Some time ago a white-haired grandmother brought her nineteen-year-old grandson to the Laboratory. He had failed and had been asked to leave a well-known preparatory school. His parents, both brilliantly successful, had given him up as hopeless. Only the grandmother hoped that some hidden ability might be discovered. When measured, the boy excelled in every measurable characteristic—except one. He was poor in clerical aptitude and consequently did poorly not merely in arithmetic but in other written examinations where attention to detail counted. He had become discouraged and finally accepted the teachers' estimate that he was dull. Assured now that he had real brains, he plugged cheerfully at the detail work and came through with honors."

"Do you ever get miracles like that with grownups?"

"I wish you wouldn't call them miracles," O'Connor said, "but we often get surprises."

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"Such as what?" I asked, and he told me the queer case of an accountant in a big manufacturing firm who was going to be let out. His associates and superiors didn't like him.

The head of his department had said to O'Connor, "You might as well test him. We're going to fire him anyway. He's able, but his heart's not in the work, and we don't like that kind of employee."

When the Laboratory began the tests, his aptitude for accounting proved extremely high—and he became immediately an interesting problem: but he scored equally high in engineering aptitude (recently renamed structural visualization). He had been doing auditing, which consisted simply of juggling groups or columns of figures. Dr. O'Connor persuaded the company, instead of firing him, to shift him to cost accounting, which required blueprints, graphs, etc., almost like those in an engineer's office. Here he not only *could* use but would be *forced* to use his second high aptitude, i.e., structural visualization, along with the other ability he thought he hated.

O'Connor urged me to beware of emphasizing miracles, but what happened was that at the end of four years the man was head of the cost-accounting department, and at the end of five years, which is today, he is head of the whole organization and boss of the executives who were going to fire him!

DISCOVERING THE REAL YOU

My curiosity had now been violently aroused about the tests themselves. I wanted now to see the wheels go round.

You begin by sitting opposite an amiable man at an ordinary flat-top desk. If they decide to give you the works, as it were, you will be tested on the following ten counts:

1. Observation.
2. Type of personality, whether subjective or objective.
3. Engineering ability (or structural visualization).
4. Accounting or clerical ability.
5. Tweezer dexterity.
6. Finger dexterity.
7. Creative imagination.
8. Inductive reasoning.
9. Visual memory.
10. Tonal memory.

They may also test you for "interest," but about the first thing I learned is that interest is no guide to aptitude. One of the strange discoveries at the

Laboratory has been that interest tests are not only frequently inconclusive, but sometimes actually misleading. Aptitudes remain constant through life, while interests change frequently with chameleonic rapidity. Every kid, at some adolescent point, wants passionately to be a cop or fireman. And the grownup, too, will unconsciously give misleading answers in all sincerity, in order to "make a better impression" or to seem to have more ambition or simply as a lollypop to his deluded ego. Generally speaking, *real* interests run parallel with aptitudes, but O'Connor prefers to deduce interests generally from aptitudes—rather than the other way round. They almost say, "*You can't trust your interests,*" and do say you can't trust your seeming interests at any given period in your age or career.

When the aptitude battery gets going, you are first asked a series of quite ordinary questions and wonder why the set is called a battery. Soon, however, varied artillery is introduced, including fantastic photographs which would delight surrealists; innocent-looking wooden blocks that frustrated gentlemen have been known to hurl through the plate-glass window; phonograph records which you might guess had been made in China during the first Ming dynasty; metal blocks with holes to stick pegs in, if you can. When you have finished, which is generally at the end of about two and a half hours, you understand full well why they chose the word *battery*.

Personality is not an aptitude in the true sense of the word. It is a distinction in temperament and, as such, governs the contentment of a person in group contact or in individual work. Objective personality correlates with salesmanship, high-school teaching, social group activities, and social-service work. Subjective personality is found among writers, doctors, engineers, and scientists.

To decide whether you have a subjective or an objective personality, they read a rapid list of words to you, with a slight pause after each word, during which you answer automatically, instantly and without reflection, with the first word which pops into your head. The words in the key list have no sequence or connection. For example, they may run *cat, girl, umbrella*.

If your automatic responses are something like *cat-Alcibiades, girl-Nellie, umbrella-aunt*, you have a subjective personality. In other words, if you tend automatically to make highly personalized responses, naming your own tom-cat and some girl in particular and recalling that your sainted aunt from Hawkinsville, Georgia, never goes without her umbrella, this is being "subjective," and you probably work best when withdrawn into yourself and alone. If you answer in terms of impersonal, world-embracing generality, being objective, you enjoy human contacts, work better with other people.

For engineering aptitude, which they now prefer to call structural vis-

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ualization, the tester trots out and places tenderly on the desk in front of you a block of wood about the shape and size of a thick dictionary. It has been trisected by a wave line cut into nine parts. It is a sort of three-dimensional jigsaw puzzle, looks simple and innocent. He lets you stare at it and study the lines as it stands there assembled. Then he takes it apart slowly, giving you time to note how it is put together. Then he shuffles the parts, and you try to put them together again.

If you have an inherent aptitude for structural visualization, you may put them together in a couple of minutes. If you are mediocre and do it by the trial-and-error method, it may take you from six to ten minutes. If you are deficient in this inherent aptitude, even though you be a doctor of philosophy or executive head of vast industries, you may hurl them through the window as that one irate gentleman did a couple of years ago. Surgeons, dentists, die-makers, and architects, as well as engineers, score high in structural visualization.

THE CASE COMPLETED

For accounting or clerical aptitude, you'll be surprised they don't ask you to do any adding or subtracting or lightning calculating. They hand you a sheet on which are printed columns of figures in groups of two each. They begin with sets composed of three numerals each, like this:

326	236	Same	Different
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All you do is to glance quickly at them and indicate at the right whether the figures are identical or different. Subsequent lines have increasingly more numerals in each group, until you get to the bottom of the sheet, when you have lines like:

412573386	412753386	Same	Different
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Speed is the essence of this test. The test administrator is working now with a couple of stop watches, and your aptitude or deficiency is judged solely by the time it takes you in split seconds to recognize whether the figures are the same or different. They are certain this digs down to *inherent* aptitude. Any tests involving the actual working of problems in arithmetic would be useless because they would drag in the extraneous elements of study, schooling, and practice. Accounting aptitude enters into typing, bookkeeping, arithmetical operations in statistics, banking, copy-desk work in newspaper offices, proofreading, and printing.

For tweezer dexterity they give you a flat metal block in which are 100 holes ranged symmetrically in rows of 10; also 100 blunt, headless brass pins, about

the size of ordinary pins but a little thicker, which you pick up, one by one, with a pair of ordinary tweezers and insert in the holes. There are no tricks or problems. The tester has the stop watch, and aptitude is decided solely by the time you take. This test shows aptitude or lack of aptitude for working with any small tool or instrument. The tool might be a surgeon's scalpel, a scientist's microscope slide, a sewing woman's needle, a carpenter's punch, or a garage mechanic's screw driver.

Next comes the test for finger dexterity, with a similar metal block, in which you use the fingers of one hand only and insert similar pins in larger holes, in groups of three pins to each hole.

An unexpected result from these tests has been the discovery that tweezer dexterity and finger dexterity have no necessary correlation whatever. You may be good at one and clumsy as an ape at the other. Finger dexterity is used in basket weaving and in manual factory assembly jobs, whereas tweezer dexterity is used by surgeons, dentists, nurses, bacteriologists, and most laboratory workers in the physical sciences and by those doing miniature instrument assembly work in factories.

There are other tests less graphic in the telling but not less important in sizing up your powers.

The visual-memory test, for example, is an unmitigated horror to persons not gifted with that aptitude. (O'Connor himself takes it every once in a while and generally makes a score somewhere between D and zero). A motion-picture machine projects a series of scrambled numbers like those on a freight car, motor license, or bill of lading. Each is shown you only for a second. Then the machine squawks and dies, and you are merely supposed to remember all the numbers if you can! The horror lies in the fact that people who possess this fantastic aptitude often easily remember all of them! It gives them a terrific advantage in expediting shipments, production following, handling order numbers. Dealers in the stock market generally possess it to a high degree.

For aptitude in tonal memory, you listen to a set of phonograph records, consisting of grouped musical notes—but not from any symphony or song. The record repeats a phrase in a group of three notes—*do, re, fa*, for instance. Then it's followed by groups in which one (and one only) of the three notes changes. You're given a pad and asked to indicate, as you listen, whether note 1, 2, or 3 has changed. The change may be a full tone or a half-tone, or the tone may be merely off key.

O'Connor does not believe vocabulary is an inherent aptitude, but he tests for it because it seems to have a greater correlation with success in all fields than any other one quality. High-up executives seem generally to have the largest vocabulary of anybody—larger (and this was a surprise) than uni-

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versity professors, journalists, and authors. The test goes far beyond mere parrot definitions, into the realm of shaded meanings, synonyms and antonyms.

In two or three weeks you receive by mail a report on your scores, an analysis of what they seem to imply, and a statement of what would seem to be, from that analysis, the general sort of endeavor in which you are most likely to be successful and happy.

The Laboratory workers keep insisting that vocational guidance is not their function and will refrain from advising too specifically what precise career would be best for you. This does not evade the basic purpose, however, for they tell you clearly the *kind* or *kinds* of work in which they are sure you will do best.

If contradictory evidence has been disclosed, you may be invited back for a conference and discussion, based on their scientific knowledge and your mutual common sense, as to what you should do about it.

PROOF OF THE PUDDING

I got a clearer idea of how these tests work and what they accomplish from studying completed cases than from watching the Laboratory operate. I was helped by its director, David Mack, the smooth-faced young giant who plays a sort of Plato to O'Connor's bearded Socrates. He kept worrying about my wanting to pick "miracle" cases, and said, "Putting all of our work into a nutshell, I think that what we want to do more than anything else is simply to point out to a person certain things that he can do well and certain things that he can do poorly and to help him as nearly as possible locate some field, *rather than any one kind of job in particular*, in which he will be called upon to do the things which he can do well and where he will not be called upon to do the things which he does poorly."

A now celebrated individual went several years ago to take the tests. He had specialized in radio engineering but didn't seem to be getting anywhere. He had a lot of technical knowledge, but the tests proved him poor in natural engineering aptitude. It was a blow to him—and a puzzle. Tests in other aptitudes were merely so-so—until they reached tonal memory, when his score jumped sky-high! This shed light on something he'd been hiding from himself. With the help of O'Connor's psychologists, he was presently realizing and confessing that his passionate emotional interest had always been in music, about which he knew very little. His real reason for wanting to break into radio was love of music, and he had taken up engineering as a means because he had no musical training and didn't dream he had any natural musical ability. He had been a rotten engineer but soon became an expert in the fields

his latent musical potentialities opened up—and now he's a big shot on a nationwide network.

A shift in one's field of activity is not always indicated. Adjustment will do the needed trick.

Recently a successful writer went to take the tests because he hated writing. His books are occasional best sellers, and he writes regularly for big magazines. Yet he loathed writing. He said he had secretly hoped O'Connor would advise him to give it up and become a carpenter. They disclosed a deplorable mediocrity at everything—almost. The only ones he rated high in were precisely those required for writing—creative imagination, inductive reasoning, observation. He rated high also in vocabulary. But he turned out to be an "objective" type—liked meeting and talking and playing with people and loathed applying the seat of the pants to the seat of a chair in solitude. That was why he hated writing. O'Connor advised him to recognize the facts, go on suffering and writing, since it was the only craft for which he had natural aptitude, but to take up lecturing, too, and to write about things which involved contact with others. He told him that he'd go bankrupt if he ever went into business and that he'd make a lousy carpenter.

A young woman doing a finger job in a factory was going to be fired, not so much because her ability was mediocre as because she was sullen and quarrelsome. The tests showed that, while she had learned to do the job with her fingers not too badly, her inherent finger dexterity was very poor. On the contrary, though she had never been employed at any job requiring tweezer dexterity, she made a high score in that. Purely as an experiment, O'Connor persuaded her foreman to shift her to a job in which she used small tools instead of her fingers. She still holds the job and is one of the most popular workers in the factory. Her ill nature came from a sense of frustration in work for which she had no natural aptitude.

EDUCATIONAL GUIDANCE

Despite these marvelous adult adjustments, it still seemed to me that the testing of pupils and students might be the Laboratory's most important contribution to the future welfare of humanity.

"Many youngsters never really get interested in education," says O'Connor. "They worry about where they are going. They are not going to college because they have no idea what they are going to do afterwards. A youngster is bound to be more interested if he has some notion of where he is going. Our purpose, therefore, is to help him direct his education toward some aim.

"Another reason for aptitude testing among younger children is to help

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them avoid difficulties. A boy who is low in clerical aptitude is almost certain to be bored by the routine, clerical schoolwork. He is very apt to have so much trouble with arithmetic that he never goes on into higher mathematics, which he can very often do and do well. He is very apt to make so many foolish mistakes that teachers do not realize that he is thinking correctly and that his mistakes are not errors of thinking but merely errors of bookkeeping."

The tests for young people are identical with those given adults, and here are some proof-of-the- pudding cases.

A boy who had failed repeatedly in Latin, French, and English scored well only in the tests indicating aptitude for scientific and engineering work. This was explained not only to him but to his prep-school headmaster. The boy had previously been told that because of his failure to pass the language requirements he should abandon all thought of college. The headmaster planned the boy's next year with care: senior physics and advanced laboratory work; chemistry, perhaps somewhat less structural than physics but a science; and geometry—three subjects in which he could make practical use of high structural-visualization aptitude. As a fourth course the boy took English, but he was told that he would be judged only by his sciences. At the end of the year he took college-board examinations in his three scientific subjects and averaged high. The result was most satisfactory. The boy acquired a confidence in himself which he had never had before, and the faculty of the school had confidence in him. No teacher is ordinarily interested in struggling with a boy who fails repeatedly in language examinations, but a boy who does well in science is a challenge to the masters who teach language.

A father who teaches in a large metropolitan high school was worried because his boy was introspective, shrinking from contacts, apathetic toward school and social activities. To everybody's surprise, the boy scored extremely objective in personality and high in a wide range of inherent aptitudes. Somewhere in life he had had some experience which had caused him to acquire on the surface the mannerisms of a subjective person but down deep he was objective—enjoyed people and contacts. He was prevailed on, in the light of the tests, to admit it. Six months later his father came in to tell Mack that the boy was a totally different person, that he was getting A's instead of C's in his schoolwork, that he had been elected president of one of the school social organizations and vice president of another.

On the other hand, a truly subjective young man who had taken the tests was accepted, after having failed in two colleges, by a third college, which studied the adjustments of the individual. The shrinking youth was told that he would not be called on to recite in class; and this was impressed on every member of the faculty. A senior scholarship man was assigned to work in the

same room with the boy evenings, not to tutor him but to be on hand if some question arose—for an extremely subjective person often wastes hours on a problem rather than make a simple query which might instantly clear up the difficulty. This student attended all his classes but for eight weeks sat without a word. Not until he discovered, at mid-term, that he had passed everything did he begin at rare intervals to take part in class discussion. He remained subjective and aloof but graduated in the top ten of his class.

A young girl had flunked out of one of the best Eastern colleges for women in the middle of her freshman year. She came in to take the tests and proved high in structural visualization. She enrolled the next year for a course in architecture. The last heard of her was that she had won two prizes and that one of her architectural layouts was on display in the lobby of the college architectural building.

The importance of early testing is shown by the sad case of the son of an engineer. He came to the Laboratory at eighteen, after barely managing to scrape through high school. This boy had inherited his father's talent without knowing it. His brilliant scores in structural-visualization tests made it seem desirable that he enter engineering, architecture, surgery, or some profession which offers similar opportunity to capitalize the gift for visualizing solid forms. Each of these fields, however, demands highly specialized college training; and four years of high-school floundering, without scientific guidance, had given this young man nothing which the college he needed could accept for entrance.

In addition to the many students who are sent by parents or come voluntarily to Hoboken, Boston, and Chicago, the Laboratory is continually doing field work, by request, in public and private schools. It also tests for various industries, including chain stores, two New York banks, one of the national radio organizations, an aeronautical concern, as well as for individual adults who apply voluntarily.

The Laboratory makes no claim to have discovered a panacea, but if a person is fundamentally sound timber, whether rare mahogany or common pine, whether he is a square or round peg, O'Connor and his associates have definitely discovered a way to help him find the right sort of hole.

THE DECLINE OF THE PROFESSIONS¹

Harold J. Laski

THE lawyer and the doctor have been the professional men *par excellence* since the Industrial Revolution. With the clergy, they have almost by common consent been accorded a special social pre-eminence in our civilization. Few of them may have won great pecuniary rewards; but they have had in compensation a status which only statesmen, a few outstanding business men, and the survivors of an aristocracy could hope to rival. Even in the English cathedral town—the rampart of the feudal spirit in Western Europe—the lawyer and the doctor have dined with the bishop and the dean these sixty or seventy years. The law has been one of the acknowledged highroads to the peerage, and the successful physician has enjoyed distinguished social patronage at least since the reign of George II. In America, as Tocqueville noted, the lawyer has always had a place apart; and the American physician has outdistanced all other types as the embodiment of public virtues.

Inherent in this recognition has been the sense that they exist to perform a public service in a way not open to business men. They enter their professions upon the basis of approved standards of competence. They have a special code of ethical conduct. They have the obligation freely to make research regarding their problems to the common advantage. They are debarred from habits which the world accepts from business men because it assumes that personal gain is their primary objective. Tradition tells us that the law and medicine are vocations in which public service is more vital than private profit. Behind the status they have acquired is the belief that there is an essential idealism in these professions more honorable than the business world can evoke from its members.

It is impossible to draw up an indictment against a profession; and there is no doubt a subtle alchemy in historic tradition which communicates at least to some of those who inherit it a special sense of public obligation. Everyone can think of doctors, from the humblest rural practitioner to men like Osler and Koch, whose devoted service to mankind is part of the glory of our time. Everyone also can think, if more rarely, of great lawyers whose attitude to, and achievement in, their vocation has added to the stature of the human race. But we must not judge a profession by the achievement of its men of genius. Rather we must inquire into the predominant characteristic of the contribution it writes into our daily life. And we must seek to relate that characteristic to the end which a profession is supposed to serve. Our business is to assess in a given social environment the way in which it is organized for the purposes it

¹From *Harper's Magazine*, November, 1935.

needs to fulfill. It is only when this has been examined that we are really in a position to pronounce our verdict.

The thesis I desire to maintain in this paper has at least the merit of simplicity. It is that the individualistic organization of these professions is now fatal to the fulfilment of their function. They cannot, I shall argue, give of their best to the civilization in which they play so large a part so long as their members offer their services for private hire and sale. In a world organized as our world is organized the result is that only the exceptional man can give his best to a community which needs his best. A world in which the lawyer's skill is bought in the market like any other commodity is one in which the lawyer becomes concerned not with justice but with the satisfaction of his client. A world in which, at least predominantly, the medical man competes with his fellows in the market for patients is one in which neither his skill nor his knowledge is the primary basis of success. Each of these professions, I shall urge, can serve the public in a full degree only as it is organized as a public profession. So long, that is, as the motive of personal gain is the primary basis of their activities the true end of a profession becomes subordinate to it. And in addition, in the present state of civilization the prospect of their fulfilling their end as a profession declines rather than grows. It has become an urgent matter, therefore, to consider the foundations of professionalism if we are to realize what it could contribute to the public good.

The most influential type of American lawyer to-day is the corporation lawyer. He may fairly be called the legal strategist of high finance, the annex of the millionaire class. His business is corporate reorganization, the legal handling of the issues of taxation, the manipulation of receiverships, the penetration, on behalf of his clients, of those bulwarks erected by legislatures to safeguard the public from the depredations of high finance. His firms become household names. They are an organized regiment of officers and soldiers protecting the wealthy from the graver consequences of social legislation. All their interests are affiliated to those of the class they serve. In that service the good of the public largely shrinks from their horizon. They too become rich. Their habits of life become dependent upon their ability to preserve their clients. They play precisely the same part in the modern business world that the mercenary soldier plying his sword for hire played before the advent of national armies. Their reward is wholly a function of their success; and their success is incompatible with the public good.

The evidence to support this somber view has reached immense proportions in recent years. Some of it has been revealed in the legal habits displayed in histories like that in which Mr. Lowenthal has shown how the investor

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was robbed in the bankruptcy of a Western railroad. Other parts are recorded in the record of attempts to violate the Sherman Act. The public utility, the investment banks, the oil industry, all contribute their grim quota. Behind the Securities Act is nothing so much as an effort to protect the public from the labyrinthine ingenuities of the Wall Street lawyer; and the Federal Trade Commission is largely concerned with the same objective. It was this type of lawyer who invented for Mr. Mellon, and a thousand lesser men, ways and means of avoiding the income tax. He is not, of course, the crude type who breaks the law. He is the more elegant type of hireling who devotes all his skill and learning to finding ways round the law of which, to the public detriment, his clients can take advantage. He sees to it that the law is bent to the service of those who control the financial power of society.

But the evil he can do does not end with the advice he gives as consultant. Not seldom he is promoted to the Bench; for the rich lawyer likes at the close of long years of work like this the independence and dignity which high judicial rank confers. Then, only too often, as we have learned from the private papers of Mr. Justice Miller, he merely acts for his clients on the Bench instead of advising them in chambers. It is not, of course, that he is avowedly dishonest. It is simply that his experience at the Bar has implanted in him what Mr. Justice Holmes has called "inarticulate major premises" in favor of property from which he cannot shake himself free simply because he does not know he is moved by them. Even the *New York Sun* could say of Mr. Justice Matthews that his appointment was equivalent to placing Jay Gould upon the Supreme Court of the United States. Blachford, Field, and Lamar were all the type of judge who, whatever his ability, reads into his decisions the habits of an advocacy limited by service to the interests of rich men. It is not without significance that in the early eighties of last century there were only two judges of the Supreme Court whose distinction had not been won by their devotion to railroad interests.

The judge, in fact, is rare whose outlook as a judge is not an expression of his habits as counsel and the prejudices which these shape. But the influence of high finance over the lawyer is more subtle than this. The lawyer must if he is to win clients of this caliber get the reputation of a thoroughly "sound" man. Radical beliefs, a constant service to some radical cause, are fatal in the majority of instances to a successful career at the Bar. The eminent lawyer who became Attorney-General to the Labor Government of 1924 almost ruined his practice by so doing; it was notable that shortly after its close he announced his withdrawal from active politics. Everyone who knows the inner history of the Roosevelt Administration knows of the pressure brought to bear upon those of its members who previously were engaged in legal prac-

tice; and, even when they have been professors of law, influence has been brought to play by rich alumni on the presidents of their universities to prevent their services from being available to the President. The corporation lawyer is the head of his profession and he sets the tone and habits of his lesser brethren. But below him is a horde almost infinite in number, of the semi-successful in whom also the standards of public service are largely devoid of meaning. The ambulance-chaser; the lawyer who specializes in protecting the professional criminal from the results of his crime; the lawyer who lives by professional lobbying in a State legislature, who may even get elected to its membership and live by a retainer from some powerful corporation; the type who preserves himself by service to the owner of small properties whom he saves, by what artifices he can, from full observance of the building and health laws; the type, again, who takes the kind of speculative case which arises out of motor accidents, workmen's compensation, or the patent laws—these are all instances of the prostitution of a profession. Partly no doubt, their existence is due to an overcrowded market which almost places a premium on undesirable practice; the average earnings of a lawyer may not be much over a thousand dollars a year. Partly also, the standards of the profession necessarily reflect the general social environment to which it belongs; in a society in which money is the unequivocal test of success most things will be pardoned to those who are successful.

But a profession in which these habits are widely prevalent cannot hope to give the public the service it requires. An inadequate Bar does not mean only an inadequate Bench; it means also inattention to overdue legal reform and to the research which is the essential basis of the reform. It is striking that the impulse to the first, both in Great Britain and in America, comes from outside the practitioners of the profession; and it is significant that legal research in both countries also is mainly sponsored either by law teachers or by social workers whose experience gives them insight into the clinical difficulties of the law. Taken as a whole, neither Bench nor Bar has shown any zeal in the past sixty or seventy years for equating law with justice. In Great Britain it is notable that the Bar Council has not throughout its history proposed a single law reform of public importance; while the council of the judges has been either hostile or indifferent to any major proposals that have been made.

The reason, I suggest, lies in the commercialization of the legal profession. Having been made a dependency of the business empire, it has had to adapt its habits to the standards of its protector. Its independence has gone; and, with its independence, there has gone also any profound social consciousness it may once have professed. It is, I think, significant that the great names in modern law are either those of judges like Holmes who came to the Bench via

scholarship, or Brandeis, whose radical opinions earned him the hostility of the profession; while among those who remained at the Bar, the creative impulse has been almost wholly confined to the great names in the law schools. The fact seems to be that the requirements of modern practice largely stifle those qualities which go to earn for the lawyer recognition that the service of the public is an integral part of his vocation. He still insists no doubt that this is an essential part of his professional obligation. But the intensity of competition, on the one hand, and the requirements of big business, on the other, make this insistence no more than a formal piece of rhetoric in which no one takes any particular credence.

The problems of the medical profession are of a different kind. For the most part, from the angle of public interest, they are threefold in their nature. There is the intense fight of the average medical man to win, and to hold, a practice, especially when he lacks private means; there are the issues connected with the etiquette of the profession; and there are the related matters of the adjustment between medicine and disciplines like that of osteopathy which are still struggling for professional recognition.

Each of these as a problem is mostly a matter in which the public interest is seriously jeopardized by the competitive nature of the profession. The average doctor who becomes a general practitioner is largely a prisoner serving a life-sentence. His success depends only partially on his scientific skill. His bedside manner, his political outlook, his religious creed, the social graces of his wife, his ability to play golf or bridge, any one or all of these may be terms in the equation he has to solve. He may fail to make headway because he is inadequately attentive to some rich neurasthenic. He may suffer because he takes part in a campaign against the slums or in favor of birth control. He may find himself made because a rich and influential patient calls him in suddenly when his ordinary doctor is away. He may fail because his visits are too businesslike and brief. He lacks the one thing in his ordinary work which is fundamental to the preservation of the scientific temper—security. Until that comes, if it comes, the things to which he has to pay attention are all of them extraneous to the technic he possesses and the service he has been trained to perform.

And that is not all. Unless he is well-established, he has little hope of keeping up with the development of medicine in any continuously profound way. He dare not take a long holiday for fear that his practice disappear to rivals. He cannot afford, for the same reason, the luxury of a period at some graduate school of medicine to refresh his knowledge. An occasional conference apart, he has little chance of rubbing shoulders with the heads of his

profession. The chance of serious research hardly comes his way. Unless a tired man at the end of a long day's work can find inspiration in the medical journals he reads, the chances, especially for a rural practitioner, are strongly in favor of his technic remaining all through life much what it was when he began to practice. Experience, no doubt, will mature his judgment; but it will not give him a really profound awareness of progress in medicine unless he is an exceptional man.

Nor does the etiquette of the profession help the public. The relation of the general practitioner to the specialist is a labyrinth of complicated punctilio. The problem of access to the hospitals, the costs of a major operation, the connection, or the lack of it, with dental work in ophthalmology, are distressing. Some of this, no doubt, we have sought to meet in recent years by the development of the medical "firm"; but this as yet only touches the fringe of the population. And we have no medical attitude of any coherent and effective kind to some of the vital medical problems of our time—abortion, for instance, and birth control. In relation to neither of these issues is the preparation provided by medical training even approximately adequate, even though knowledge of, and decision upon, the issues they raise are vital to the happiness and well-being of the public. Anyone who analyzes the profession from this angle will find it difficult not to conclude that its rules are significant less as a protection for the patient than as a safeguard for the economic interests of doctors. As a profession, medicine has not even begun to consider the social implications of its organization.

Nor is the profession enlightened about its relation to peripheral disciplines. That it has a case against the osteopath may well be true; that it has, especially in England, fought him less from the angle of the public than to safeguard its own monopoly of the right to practice will be obvious to anyone who seeks to scrutinize the evidence. There is nothing whatever to be said for the General Medical Council's savage persecution in England of Dr. Axham for his association with the famous bonesetter, Sir Herbert Barker. Hardly more satisfactory is the absence of any coherent relations with the dentist and the psychologist. The relation of the profession to proprietary products in drugs, especially of the patent medicine variety, is a curious example of a deficient public sense; in the recent fight in Congress for pure drugs there should have been an organized and irresistible medical opinion. Progress in this realm is hampered at every turn by the fact that the economic insecurity of the profession prevents it from offering that definite guidance to the public of which it stands in so great a need.

Nor must one forget the different treatment of rich and poor in medicine. With noble and notable exceptions, it is largely true in Great Britain that a

successful panel-doctor under the insurance system cannot hope to grapple adequately with his patients. In the hospitals as compared with the private nursing-homes the long hours of waiting, the early hours of waking, the frequent impossibility of effective convalescence, all point to an absence of a socially adequate attitude in the medical profession. It is notable that a rich man who fights a charge of being drunk when driving a car is almost invariably able to bring a private physician to counter police evidence brought against him; it is also notable that a poor man under a similar charge rarely appears able to secure such evidence on his behalf. Defective standards of housing, of wages, of hours of labor, with the toll they take of the health of the general population far too infrequently invoke any organized expression of medical protest. The doctor's social opinions indeed tend to be less an inference from the plain lessons of his medical experience than the expression of the middle- or upper-class environment to which he belongs. Either he regards these matters as outside his purview or he is afraid to jeopardize his standing by embracing unpopular opinions. In the field of public health the pressure for great social reforms has too often come from without the profession, even when the facts leading to that pressure have been gathered by doctors who, because they were in the service of State or city, could afford to make the revelations urgent to an advance of public well-being.

One does not read of fashionable physicians in Harley Street or Park Avenue leading an attack upon the slums. The medical man who fights for the right of the poor to that birth-control information he sells daily to the middle class is rare; in England the author of the most popular handbook on this theme published it under a pseudonym lest he injure his standing in the profession by association with it. Our inability to make a serious impression upon the long unchanging statistics of maternal morbidity is in large part the outcome of the profession's silence upon their meaning. The diet of poor children in relation to the quality of their school-work, the absence of adequate recreational facilities in the great cities, the vast problem of sex-hygiene in schools, the standards of relief in relation to nutrition for the unemployed—upon all these things, to take only some of the outstanding issues of the time, what is notable about the medical profession as a whole is its absence of any coherent civic sense. The occasional doctor may care profoundly about these things. The profession as a profession lacks that sense of urgent obligation to the public which alone could effect the radical reforms that are essential.

Broadly speaking, the indictment brought against the medical profession by Graham Wallas half a generation ago remains as true as when he wrote it. It shrinks from the effort to think out afresh its foundations, and this, "combined with a narrow calculation of individual advantage, prevents the com-

munity from receiving the full benefit of that transformation." His economic uncertainties compel the average doctor to seek, so far as he can obtain it, a local monopoly enforced by as effective a boycott as he can impose upon the intruder. Within his area he can give any treatment he thinks fit with little need to keep up to date and little fear of expert criticism or legal action. When he retires he can sell his practice to the highest bidder as though he deals in soap or wine instead of human life. He needs at every point the help of the specialist, the skill of the nurse, the microscope of the bacteriologist. But he knows also that, save in dramatic cases, he can recommend the use of these only to his richer patients. All his emphasis is on curative medicine; with the major aspect of prevention he has hardly any concern. In a fundamental way he is fighting a battle he cannot win because he is not organized to combat the forces against which he is fighting.

A sane world surely would approach these issues from a different angle. These professions are integrally related to public well-being. Their purposes cannot be fulfilled so long as their members are dependent upon the hazards of a commercial market. It is notable that in each of them the best work is done, the highest public spirit displayed by those of their members from whom the virus of insecurity has been removed. The professor in the law school like Harvard or Yale, the medical man in the public health service, whether Gorgas in America or Sir David Bruce in England, the servant of a great medical institution, like Hughlings Jackson or Carrel or Alfred Cohn, represents an achievement of the kind which gives to the profession its essential meaning. They represent a continuous attention to standards, an independence of pressure from privilege, a power to contemplate only the highest ends, which are attainable only because their services are not bought and sold under competitive pressure. Until we can make their spirit permeate the professions as a whole, we cannot prevent them from declining in the way that they have done in recent times.

The way out, therefore, is to organize them as public services. The legal profession should be a great corporation under government control, the members of which should work for the public on a fixed salary at fixed charges. Instead of plying for hire, they should act as public servants who undertake cases in terms of the public import they reveal. In this fashion we could end the corporation lawyer, the ambulance chaser, the defaulting attorney, the lawyer who devotes his energies to helping rich men to evade the income tax. Each area could have its contingent of lawyers, largely self-governing, disinterested, eager, because they were disinterested, to secure the continuous improvement of the law. We should not, as we do now, have, as so largely we

have, one law for the rich and another for the poor. We should escape the danger of judges biased by their existence to one side of the social equation. We could make the standards of legal education adequate. We could properly relate the academic to the practical side of the profession. We should not meet at every turn of the road to reform the vested interests of lawyers themselves hostile to change which might jeopardize their financial position. We could assure the poor client, not less than the rich, of an adequate attention to his problems.

It is of course an immense reform; but the experience of Soviet Russia shows that it is a practicable one. There the private lawyer has gone. He has been replaced by a body of public servants organized not to benefit themselves, but to serve the public merely. Under a control partly of themselves, partly of the Bench and the Ministry of Justice, they give the ordinary citizen a quality of service far more profound than anything he could even hope for in the days of the Tzar. They have no financial interest in either the content or the number of their cases. Their advancement in the profession is dependent solely upon the profession's own judgment of the quality of the work they perform. They can freely devote themselves to research if they feel the call to do so. They can change from teaching to practice or practice to teaching whenever, under reasonable circumstances, they wish for the change. The result of the system in Russia is quite unquestionably one of the triumphs of the regime. It has shown that the legal profession, once it is freed from dependence on property, can become one of the most powerful instruments of social well-being which a community possesses; for it is notable that, whereas with ourselves, the lawyer is regarded, not unjustly, as the enemy of social progress, in Russia Bench and Bar alike are looked upon as among the most essential of its guardians.

It is of course true that in a society like ours the attainment of such an ideal would, for the law, be a long and arduous adventure; perhaps it is possible of achievement only in a socialist state. But of the medical profession this is emphatically not the case. Already its public side is a vast organization; already also the preventive and research sides of medicine are predominantly in public, or quasi-public hands. The change required to give a full public context to the whole is much smaller than in the case of the law. To make the whole profession a public one, even in a capitalist society, we require only to extend the idea of insurance for medical care to all members of the population. Upon that basis the cost of an adequate service for each section of the population could be assured without difficulty. The doctor would then be a public servant assigned, according to his preference and qualities, to the appropriate branch and area of the service. He could be promoted, as he is now promoted

in the public health departments of English county and city, in terms of proven achievement. He would work as a member of a team constantly in touch with the latest developments of research. He could from time to time be given leave for postgraduate training or research. He would be free from the need to win the support of his patients upon considerations independent of his professional skill. He would not need to vary the treatment he recommended in terms of his patients' means. He could develop a proper relation not only to other members of his profession, but also to the peripheral disciplines, without the fear that he was jeopardizing his practice. He would be free from that haunting fear of insecurity which today poisons the wellsprings of his effort.

To the layman a development such as this surely presents immense advantages. His insurance would afford him, as of right, access to adequate medical care. He need not fear, as he now has to fear, the cost of an operation, the possible expense of a specialist, the hazard of a diagnosis made by a man whose last serious contact with scientific medicine may be as much as a generation old. He could have the assurance that the profession was not, at every point, defending, at his cost, vested interests from invasion. He could feel confident that the public attitude in medicine was determined by the only consideration which should govern it—the standard of health in the community. For in matters like housing or birth control a great public profession organized in this way need not fear the economic pressure of privilege. It would have the power to make its objective findings upon them, and the disinterestedness to fight for their acceptance. The average doctor, on such a scheme, could become in the full sense a citizen; for the simple reason that his science could then become conscious of its social obligations in a way that is not now open to him. That a profession will, given the opportunity, act in this way has been proved to demonstration by British experience of its public health services. For it is notable that when, after the crisis of 1931, the government sought to economize upon the health services of the nation, it was the pressure of medical officers of health and school doctors, and the objective testimony of their impartial reports which awakened public opinion to the significance of governmental opinion. The doctor who is free from the pressure of competition can combine the functions of scientist and citizen so that the lessons of the one permeate and control the obligations of the other. Our present system is a standing and organized denial of that opportunity.

What has here been said of lawyer and doctor is not confined to their professions. The sickness of an acquisitive society, above all in its present phase of contraction, poisons every vocation in which the principle of disinterestedness should be paramount. The indictment I have made of them could be

brought, not less urgently, against the teacher and the journalist, the engineer and the architect. There are thousands of teachers in every society driven by the pressure of privilege to subordinate the truth that is in them to economic necessity. There are few journalists, not working for an endowed journal which does not need to consider profit, who have not at some time been compelled to sacrifice the truth in the news to a point of view demanded either because it paid or because it was exacted by the proprietor of the journal he served. It is well known that the mine-managers of Great Britain in 1919 were in favor of the socialization of the mines in the national interest; but they did not dare to say so for fear that they might be adversely affected if the Royal Commission of that year did not result in the nationalization of the mines. There are architects and to spare—as our slums bear witness—who have lent themselves to building schemes which outrage every canon of decency their profession claims to uphold.

What, in fact, I have said of lawyers and doctors represents a general truth about our society from the consequences of which there is no escape within the confines of the present social system. So long as its predominant motive is the making of profit for private persons, the demand which will shape all its habits will be that which ministers to the successful operation of that motive. Its operation will create vested interests of privilege; and these will fight with all their resources against a communal well-being which seeks either to modify or to extinguish them.

From the operation of this rule there is no reason, on the evidence, to suppose that the professions can escape. And when, as now, a society based on the motive of private profit runs into heavy weather, its privileged class will fight more ardently than ever to preserve its privileges; and professions like the law and journalism, which have a special service to render to privilege, will find themselves more particularly degraded by reason of the demands made upon them. Nothing perhaps illustrates this better than the degradation of German scholarship under the Hitler regime. A body of learned professors, whose vocation was the disinterested service of truth, were there willing to prostitute their scholarship to ends which hundreds of them knew to be mean and false. They were willing to do so, with hardly an exception; and thereby they showed that when privilege in a decaying social system arms itself for battle it demands from its dependents the sacrifice even of their last shred of self-respect.

A society accordingly which aims at the utilization of scientific learning has two principles upon which it must build its life. It must, in the first place, expunge from its habits the privilege that is built upon economic power; for this in the end shapes the use of science to its own preservation and, therefore,

frustrates its objective. It must also, in the second place, so organize all professions which are important for the daily life of the society as to render them independent of the profit-making motive. To fail in either of these is to leave the well-being of the community at the mercy of men who make learning the hired lackey of their zest for power. A society so founded has inherent in it the roots of inescapable conflict. It has placed its organized authority at the service of men whose interests are antithetic to its own. The conflict may be concealed when the society is in process of expansion. When, as with crisis, its presence is revealed, the result is to jeopardize that social heritage which gives life all its grace and dignity.

VOCABULARY AND SUCCESS¹

Johnson O'Connor

WHAT is success? And how is it gained? Whether one thinks of success as financial reward, or as assured social position, or as satisfaction in able work accomplished and recognized, or as a combination of the three and something more, many factors contribute. Most of them elude our understanding and remain intangibly beyond definition. A vital force drives some individuals over every obstacle. With others that great generalization, character, adds strength of a different sort. Neither may ever be restricted to a hard and fast formula; certainly, at the moment, neither can be measured. But other more concrete constituents of success have been isolated and studied in the laboratory. One of these is a large English vocabulary.

An extensive knowledge of the exact meanings of English words accompanies outstanding success in this country more often than any other single characteristic which the Human Engineering Laboratories have been able to isolate and measure.

What is meant by vocabulary? Just what the word signifies. Does the word *enervating* mean *soothing*, *exciting*, *distressing*, *invigorating*, or *weakening*? For most well-educated persons the choice is between *invigorating* and *weakening*. Fifty-two per cent of the college graduates whom we have measured choose *invigorating* as the synonym; only sixteen per cent choose *weakening*, the dictionary definition. Does *stilted* in the phrase 'his stilted manner' mean *irresolute*, *improper*, *cordial*, *stiffly formal*, or *vicious*? A majority of

¹From *The Atlantic Monthly*, February, 1934. Introduction to *English Vocabulary Builder* by Johnson O'Connor, Human Engineering Laboratory.

educated persons mark *stiffly formal*, but more than a third mark *irresolute*. Answers to the meaning of *scurrilous*, in the phrase 'scurrilous rogue,' divide themselves more or less evenly between *hurrying*, *desperate*, *abusive*, *frantic*, and *diseased*, with *desperate* the most popular. For *peremptory*, a majority mark *decisive*, but many choose *persuasive*, *uncertain*, and *angry*. *Pleasant*, the fifth choice, is not as popular. *Linguist* and *glutton* are equally enticing as synonyms for *polyglot*. For *refulgent*, in 'a refulgent smile,' *repellent* is most intriguing and *very bright* next, with *mischievous*, *flattering*, and *sour* all following closely in popularity. For *monograph* forty per cent choose *soliloquy* and less than twenty per cent *treatise* and *epitaph* each.

The word *vocabulary*, as used in this article, signifies a knowledge of the dictionary meaning of just such words as *enervating*, *stilted*, *scurrilous*, *peremptory*, *polyglot*, *refulgent*, and *monograph*. Not until one attempts to pick an exact synonym does one realize the difficulty. One may like the sound of a word and use it in a picturesque way without being accurate in its meaning.

To measure the vocabulary of an individual, the Laboratory uses a list of one hundred and fifty test words. Each is printed in italics in a short phrase and is followed by five choices, all of which fit the phrase but only one of which is a synonym of the test word. The instructions are: 'Underline that one of the five choices which is nearest in meaning to the word in italics.' The words to be defined were selected by Alexander Inglis of the Graduate School of Education, Harvard University. His intention was to include words which appear once or twice in 100,000 words of printed matter. It is a general reader's vocabulary from which technical terms have been excluded. The test words vary from some that are quite easy, such as

Thrilling experiences: dangerous, exciting, unusual, disgusting, profitable,

to others that are more difficult, such as

Glabrous heads: bald, over-sized, hairy, square, round,

which only twenty-one per cent of college graduates mark correctly. Since one fifth, or twenty per cent, should guess the correct answer, the meaning of *glabrous* is practically unknown. The test measures knowledge of words one recognizes, not necessarily of those one uses. The words one uses accurately are, no doubt, fewer than those one recognizes, but there is probably a relation between the two.

Three hundred high-school freshmen average 76 errors in the list of 150 words. Seven hundred college freshmen average 42 errors. One thousand college graduates from a wide variety of colleges—most of them, however, in the eastern part of the United States—average 27 errors, and vary from the

one person in a thousand who achieves a perfect score to the one who knows less than 50 of the 150 items. The college professors whom we have measured average 8 errors; major executives average 7 errors. Major executives score higher in this English vocabulary test than any other selected group with which we have experimented.

By the term 'major executives' is meant all individuals who, for five years or longer, have held the position of president or vice president in a business organization. Such a definition includes both successful and unsuccessful executives, provided only that they have survived five years; it includes alike forceful personalities and figureheads; but it has the great advantage of excluding our personal judgment from the process of selection. Major executives as thus defined average in the top ten per cent of college graduates as a whole.

Although it is impossible to define success rigidly or scientifically, it seems to be true, nevertheless, that a large vocabulary is typical, not exclusively of executives, but of successful individuals. It happens that in the business world successful men and women are designated by this special appellation, 'executive.' The successful lawyer or doctor is marked by no such name. But if, to the best of one's ability, one selects successful persons in the professions, they also score high in vocabulary.

For one meaning of success the Century dictionary gives 'a high degree of worldly prosperity.' The measured English vocabulary of an executive correlates with his salary. This does not mean that every high-vocabulary person receives a large salary, but the relation between the two is close enough to show that a large vocabulary is one element, and seemingly an important one.

Furthermore, the executive level which a man or woman reaches is determined to some extent by vocabulary. In many manufacturing organizations the first step in the executive ladder is the leading hand, called sometimes the working foreman. This man is in charge of half a dozen or a dozen others. He works at the bench or at a machine as they do, but is the executive of the group. The next step is the foreman, who may be in charge of as many as a hundred or more individuals. He does no bench work, he is not a producer, but devotes full time to his executive duties, to the keeping of records and to the handling of the personnel. The next step in many large organizations is the department head or superintendent or manager, who ordinarily does not come in direct contact with the workers, but handles them through his foremen. The final step is the major executive or official, the vice president or president of the organization.

These four executive ranks represent four degrees of success, in one sense in which that word is used. One is *advanced* from leading hand to foreman, from foreman to manager, from manager to president. As far as we can

determine by measurements, the leading hand and the official have much the same inherent aptitudes. They differ primarily in vocabulary. Typical non-college-graduate shop foremen average, as a group, about as high as college graduates. Department heads score higher, roughly fifteen errors, and major executives the highest of all, averaging only seven errors. Whether the word 'executive' refers only to the major group or is used in the broader sense to mean anyone in charge of other workers, it is still true that the executive scores higher than those under him and higher than other persons of similar age and education.

An interesting sidelight on the high vocabulary scores of executives is that they were unforeseen. When a scientist expects a result and finally achieves it there is always the feeling that, regardless of the care he has taken, personal bias may have entered. Six or eight years ago the Human Engineering Laboratories tested forty major executives of the Telephone Company who had offered themselves as victims to be experimented upon in a search for executive characteristics. At the same time the Laboratory was also revising the vocabulary test, not with the notion of using it with executives, but with the hope that it might prove of value in education. One day, with no thought of the consequences, I gave it to an executive, and from then on was asked for it regularly because of the interest it aroused. I paid little heed to the results until one day an executive refused to take the test. He had been obliged by lack of money to leave school at fourteen, and had earned his own living since. With no further formal education, he had worked his way to a major position. He had taken the aptitude tests without hesitation, but vocabulary seemed to him so directly the result of schooling that he knew in advance he would fail. His own words were that he had made his way without being found out and he was not willing to give himself away. But in scientific work one cannot test only those who think they will do well, and we finally persuaded him to try the vocabulary test. He made two errors where the average college graduate makes twenty-seven.

Was it luck? Or was it significant of something which we had not recognized? The Laboratory listed the vocabulary scores of one hundred executives and, parallel with them, the scores of one hundred miscellaneous college graduates. The difference between the two arrays was striking. Only nine per cent of the college graduates scored as high as the average major executive.

Why do large vocabularies characterize executives and possibly outstanding men and women in other fields? The final answer seems to be that words are the instruments by means of which men and women grasp the thoughts of others and with which they do much of their own thinking. They are the tools of thought.

Before accepting so far-reaching a conclusion several more obvious explanations must be examined and excluded. The first and most natural supposition is that successful persons acquire words with age and with the experiences of life. Success does not usually occur early. The successful group were necessarily older in both years and experience than the general run of college graduates with whom they were compared; and their large vocabularies might be the inevitable result of age.

To probe this point a study of the growth of vocabulary with age was undertaken. From twelve, the earliest age for which we have a large number of measurements, to twenty-two or twenty-three vocabulary expands steadily and at a uniform rate. Through this school period the score on the vocabulary test of one hundred and fifty items improves five words a year. From twenty-three to fifty vocabulary continues to increase, but changes no more in these twenty-five years than in two school years—not enough to explain the high scores of executives. Normally, vocabulary is acquired early in life, before most men have made appreciable progress toward a responsible position. The large vocabularies of successful individuals come before success rather than after. Age and the experiences of life may contribute new words, but certainly do not explain in full the high vocabulary scores of business executives.

The next thought is that effective schooling may be the source both of a wide vocabulary and of executive success. It is known, from the work which the American Telephone and Telegraph Company has undertaken, that there is a relationship between school success and business success later in life. Although not everyone who leads his class becomes a brilliant executive, and although not everyone who fails in school fails in life, in general school success preludes executive success. Schooling may be the vital factor of which the large vocabularies which we are measuring are but by-products.

To obtain evidence bearing on this point, we measured the vocabularies of twenty men who had left school at the age of fifteen and who had worked their way into major positions. They also averaged only seven errors. Their scores equaled those of the college-graduate executives. In the case of these twenty men it is their vocabularies which are important rather than their formal school education. Their large vocabularies are not the result of schooling and must, we therefore conclude, be significant for some other reason than as a by-product of an educational background.

Is, then, a college background of no importance? Has the non-college man the same chance of becoming an executive as has the college graduate? This fact seemed worth determining. Of the major executives in a large industrial organization, sixty per cent are college graduates, forty per cent non-college.

VOCATIONS AND PROFESSIONS

At first glance, college would seem to have done little, for almost half are not college men. But, to be fair to education, there is another angle from which to view this result. Of the college graduates with this same company, more than three quarters are in executive positions, whereas, of the non-college men, well under a tenth are in similar positions. College graduates, in general, average measurably higher in vocabulary than do non-college persons. Furthermore, of the college group a significantly larger percentage are executives.

One would like to conclude without further preamble that the vocabularies of the college group are large because of directed effort and that these purposefully gained vocabularies have contributed to executive success. Non-college executives, then, are those rare individuals who pick up words so easily that their vocabularies are large without effort. But there is one further possibility which must be investigated.

Although the vocabulary test was designed to measure knowledge which must have come through books or by word of mouth, a high score may reveal an underlying aptitude for language. It may be this flair which is the contributing factor in both vocabulary and success later in life.

It should be possible to isolate and measure diathesis apart from knowledge. We have worked on this approach for a number of years, thus far unproductively. For the time being we must leave the conclusion of this part of the research in abeyance and admit that the vocabularies of successful executives may reveal an aptitude.

Vocabularies may always be consciously increased regardless of the presence or absence of any gift. A knowledge of the meaning of each word at one's command must have been obtained by word of mouth or through reading, by some educational process.

Furthermore, with groups of individuals of apparently similar aptitudes, the amount of vocabulary added in a given period varies with different educational techniques. At Stevens Institute of Technology the freshman class is divided alphabetically into four sections. Each of these studies freshman English under a different member of the faculty. Four years ago the entire class took the vocabulary test the first week of freshman year. The four sections averaged about the same in vocabulary, and there was no reason to suppose that, selected as they were, one would score higher than another or have more ability. Yet, when remeasured nine months later, two of the sections had improved more than average academic freshmen, one section had improved only half this amount, and the fourth had retrogressed slightly.

The improvement of one section may have been due to the fact that the instructor was interested in the vocabulary test and its implications. The important fact is that differences in vocabulary improvement were caused by

differences in teaching techniques—in other words, that an improvement in vocabulary score can be produced by education.

Those boys and girls whom the Laboratory has measured and urged to better their vocabularies, and then remeasured at the end of two or three years, have shown more than average improvement. Here again vocabulary is induced independent of aptitude. It is for this reason that the Human Engineering Laboratories, in helping a youngster to find himself and start in the right direction, use a vocabulary test in lieu of a general intelligence test.

We come now to the question of whether or not that increment of vocabulary directly due to educational stimulation contributes to success. The four sections of the freshman class at Stevens Institute of Technology to which reference has been made, which took freshman English with different members of the faculty and improved different amounts in vocabulary, were followed to see the effect of these new vocabularies on school work the next year. The four sections averaged nearly the same in school marks freshman year. Sophomore year the two sections which had enlarged their vocabularies the previous year showed general gain in all school subjects—not strikingly, not enough to prove the point once and for all time, but enough to suggest that a vocabulary acquired consciously reflects in general school improvement the next year.

It is always possible that the improvement in school work was due to inspired teaching, to added incentive, but if this were true it would seem as if the improvement in school work should appear immediately freshman year, whereas it did not appear until sophomore year after the vocabulary had been acquired. This seems to indicate that it is the additional words themselves which are the tools used the next year, that words are important in and for themselves.

Granted that diction is important, and many would agree without elaborate proof of the point, how, from the standpoint of the school, can it best be given; and, from that of the individual, how best achieved? Is it a knowledge of Latin and Greek which lays a sound foundation for a real understanding of words? Or is it constant reading? Or the assiduous perusal of the dictionary? Probably all contribute; as yet we have found no straight and easy road.

In the search for a road to vocabulary we have unearthed several facts which throw light on the learning process. One of these, which, if rightly interpreted, may prove to be of far-reaching importance to education, is that vocabulary advances with an almost unbroken front. The words at the command of an individual are not a miscellany gathered from hither and yon. With a very few exceptions they are all of the words in the dictionary up to those of an order of difficulty at which his vocabulary stops abruptly, and

almost no words beyond. In the revised form of the test which is now available for school use, the items are arranged in order of difficulty as determined by actual test results. The first fifteen or twenty words of the test are known to the average high-school freshman or sophomore. The next thirty to forty are on the border line of his knowledge. Some he recognizes, others are vaguely familiar, and others he has not yet encountered. The balance are so far beyond him that he marks correctly no more than the one in five which he guesses by pure chance.

For convenience of scoring, the words are divided into ten groups of constantly increasing difficulty. One who knows the words of Group II, second in difficulty, almost invariably marks correctly every word of Group I. Another youngster who may know the words of, let us say, Group VI rarely fails on a single word in any of the first five easier groups. Similarly, one who fails on twelve of the fifteen words in any one group—that is, marks correctly only the one word in five which he guesses—almost never knows a word in any more difficult group. There are not, as we had expected, stray words in the difficult part which one who fails earlier in the test has stumbled upon and remembered. These unusual words, if previously encountered as they must have been in reading and conversation, are too far beyond the point he has reached to make any lasting impression.

The one exception to this rule is the foreign student who may know difficult words because of their similarity to his own language, but miss much easier ones. Thus the Southern European often marks correctly such difficult words as *cephalic*, *garrulity*, and *piscatorial*, because of knowledge of Italian and French, but fails to know much easier words of Old English origin, such as, for instance, *knack*, *blotch*, and *cope*.

In the region where learning is taking place, the commonest error is the confusion of a word with its exact opposite. Among seventh- and eighth-grade and first-year high-school pupils, nearly a third mark *found guilty* as the correct meaning of *acquitted*. *Upright* is the most popular misconception for the meaning of *reclining*; and, strange as it may seem, *neat* is the commonest misconception of *untidy*. The seventh-grade youngster berated for keeping an untidy room quite often evidently receives the impression that he is too orderly. The failing is not limited to the high-school group. For *incontrovertible* the correct answer *indisputable* is usually marked by college men, but of the remaining four choices *unsound* is by far most popular. In the phrase 'You allay my fears,'—where the five choices are *justify*, *calm*, *arouse*, *increase*, and *confirm*,—*calm* is usually answered by the educated group, but *arouse* is next most popular. In the phrase 'He retracts his criticism,' *withdraws* is the correct answer and *repeats* is the most common delusion. In 'He

vented his wrath,' *poured forth* is correct and *restrained* is the commonest misapprehension.

One need but turn to words of which one is not quite certain to see how difficult it is to distinguish opposites. One evening at dinner with a delightful Dean of education, we fell to discussing this question. He recognized *cathode* and *anode* instantly as electrical terms designating the two poles, but hesitated a moment before saying which was which. *Port* and *starboard* he admitted he had never straightened out and resorted to some such phrase as 'Jack left port.' *Gee* and *haw* were beyond him. He surmised that they meant *up* and *down*, but said frankly he did not know the words. When told that they were used in ploughing, he was instantly interested, but did not care at all which was which. He was taking the first step in the learning process, placing them in their correct environment. The fifty-two per cent of college graduates who choose *invigorating* as the meaning of *enervating* are on the verge of knowing the word. The dictum of modern education, never to teach what a thing is not, has perhaps come from a realization of this confusion of opposites. The confusion seems, however, to be a natural step in the learning process.

In the study of human beings the factors involved are so numerous and so intertwined with one another that the experimenter, in unraveling the strands, must pause periodically to make certain that he is progressing. What then has been discovered? An exact and extensive vocabulary is an important concomitant of success. So much is known. Furthermore, such a vocabulary can be acquired. It increases as long as an individual remains in school or college, but without conscious effort does not change materially thereafter.

There may be some subtle distinction between a natural vocabulary picked up at home, at meals, and in reading, and one gained by a study of the dictionary. The latter may not be as valuable as the former. But there is nothing to show that it is harmful and the balance of evidence at the moment suggests that such a consciously, even laboriously, achieved vocabulary is an active asset.

Government

LIFE IN UTOPIA • THOMAS MORE

IN BROBDINGNAG • JONATHAN SWIFT

ON DEMOCRACY • THOMAS CARLYLE

THE TAMING OF POWER • BERTRAND RUSSELL

DEMOCRACY IN THE MAKING • HERBERT AGAR

LIFE IN UTOPIA¹

Thomas More

HUSBANDRY is a science common to them all in general, both men and women, wherein they be all expert and cunning. In this they be all instructed even from their youth; partly in schools with traditions and precepts, and partly in the country nigh the city, brought up as it were in playing, not only beholding the use of it, but by occasion of exercising their bodies practising it also.

Besides husbandry, which (as I said) is common to them all, every one of them learneth one or other several and particular science, as his own proper craft. That is most commonly either clothworking in wool or flax, or masonry, or the smith's craft, or the carpenter's science. For there is none other occupation that any number to speak of doth use there. For their garments, which throughout all the island be of one fashion (saving that there is a difference between the man's garment and the woman's, between the married and the unmarried), and this one continueth for evermore unchanged, seemly and comely to the eye, no let to the moving and wielding of the body, also fit both for winter and summer: as for these garments (I say), every family maketh their own. But of the other foresaid crafts every man learneth one; and not only the men, but also the women. But the women, as a weaker sort, be put to the easier crafts. They work wool and flax. The other more laboursome sciences be committed to the men. For the most part every man is brought up in his father's craft, for most commonly they be naturally thereto bent and inclined. But if a man's mind stand to any other, he is by adoption put into a family of that occupation which he doth most fancy, whom not only his father, but also the magistrates do diligently look to, that he be put to a discreet and honest householder. Yea, and if any person, when he hath learned one craft, be desirous to learn also another, he is likewise suffered and permitted. When he hath learned both, he occupieth whether he will, unless the city hath more need of the one than of the other.

The chief and almost the only office of the syphogrants² is to see and take heed that no man sit idle, but that every one apply his own craft with earnest diligence; and yet for all that not to be wearied from early in the morning to late in the evening with continual work, like labouring and toiling beasts. For this is worse than the miserable and wretched condition of bondmen; which nevertheless is almost everywhere the life of workmen and artificers,

¹From the *Utopia* by Sir Thomas More (1515).

²Every thirty families or farms chose annually an officer whom they called in their language "syphogrant," meaning "The Elders of the Sty."

saving in Utopia. For they, dividing the day and the night into twenty-four just hours, appoint and assign only six of those hours to work, three before noon, upon which they go straight to dinner: and after dinner, when they have rested two hours, then they work three: and upon that they go to supper. About eight of the clock in the evening (counting one of the clock at the first hour after noon) they go to bed; eight hours they give to sleep. All the void time, that is between the hours of work, sleep, and meat, that they be suffered to bestow, every man as he liketh best himself: not to the intent they should misspend this time in riot, or slothfulness, but, being then licensed from the labour of their own occupations to bestow the time well and thriftily upon some other good science, as shall please them. For it is a solemn custom there, to have lectures daily early in the morning, where to be present they only be constrained that be namely chosen and appointed to learning. Howbeit a great multitude of every sort of people, both men and women, go to hear lectures: some one and some another, as every man's nature is inclined. Yet, this notwithstanding, if any man had rather bestow this time upon his own occupation (as it chanceth in many, whose minds rise not in the contemplation of any science liberal) he is not letted or prohibited, but is also praised and commended as profitable to the commonwealth.

After supper they bestow one hour in play: in summer in their gardens, in winter in their common halls, where they dine and sup. There they exercise themselves in music, or else in honest and wholesome communication. Dice-play, and such other foolish and pernicious games, they know not, but they use two games not much unlike the chess. The one is the battle of numbers, wherein one number stealeth away another. The other is wherein vices fight with virtues, as it were in battle array, or a set field. In the which game is very properly shewed both the strife and discord that vices have among themselves, and again their unity and concord against virtues: and also what vices be repugnant to what virtues; with what power and strength they assail them openly; by what wiles and subtlety they assault them secretly, with what help and aid the virtues resist and overcome the puissance of the vices; by what craft they frustrate their purposes; and finally by what sleight or means the one getteth the victory.

But here, lest you be deceived, one thing you must look more narrowly upon. For seeing they bestow but six hours in work, perchance you may think that the lack of some necessary things hereof may ensue. But this is nothing so. For that small time is not only enough, but also too much, for the store and abundance of all things that be requisite, either for the necessity or commodity of life. The which thing you also shall perceive, if you weigh

and consider with yourselves how great a part of the people in other countries liveth idle. First, almost all women, which be the half of the whole number, or else if the women be anywhere occupied, there must commonly in their stead the men be idle. Besides this, how great, and how idle a company is there of priests and religious men, as they call them? Put thereto all rich men, specially all landed men, and noblemen. Take into this number also their servants: I mean all that flock of stout, bragging rushbucklers. Join to them also sturdy and valiant beggars, cloaking their idle life under the colour of some disease or sickness. And truly you shall find them much fewer than you thought, by whose labour all these things be gotten that men use and live by. Now consider with yourself, of these few that do work, how few be occupied in necessary works. For where money beareth all the swing, there many vain and superfluous occupations must needs be used, to serve only for riotous superfluity and dishonest pleasure. For the same multitude that now is occupied in work, if they were divided into so few occupations as the necessary use of nature requireth, in so great plenty of things, as then of necessity would ensue, doubtless the prices would be too little for the artificers to maintain their livings. But if all these, that be now busied about unprofitable occupations, with all the whole flock of them that live idly and slothfully, which consume and waste every one of them more of these things that come by other men's labour than two of the workmen themselves do; if all these (I say) were set to profitable occupations, you easily perceive how little time would be enough, yea, and too much, to store us with all things that may be requisite either for necessity, or for commodity; yea, or for pleasure, so that the same pleasure be true and natural.

And this in Utopia the thing itself maketh manifest and plain. For there in all the city, with the whole country or shire adjoining to it, scarcely five hundred persons of all the whole number of men and women, that be neither too old nor too weak to work, be licensed from labour. Among them be the syphogrants (which though they be by the laws exempt and privileged from labour), yet they exempt not themselves; to the intent they may the rather by their example provoke other to work. The same vacation from labour do they also enjoy, to whom the people, persuaded by the commendation of the priests and secret election of the syphogrants, have given a perpetual licence from labour to learning. But if any one of them prove not according to the expectation and hope of him conceived, he is forthwith plucked back to the company of artificers. And contrariwise, often it chanceth that a handicraftsman doth so earnestly bestow his vacant and spare hours in learning, and through diligence so profit therein, that he is taken from his handy occupation and promoted to the company of the learned.

Out of this order of the learned be chosen ambassadors, priests, tranibores,³ and finally the prince himself; whom they in their old tongue call Barzanes, and by a newer name, Adamus.⁴ The residue of the people being neither idle, neither occupied about unprofitable exercises, it may be easily judged in how few hours how much good work by them may be done towards those things that I have spoken of. This commodity they have also above other, that in the most part of necessary occupations they need not so much work as other nations do. For first of all, the building or repairing of houses asketh everywhere so many men's continual labour, because that the unthrifty heir suffereth the houses that his father builded in continuance of time to fall and decay. So that which he might have upholden with little cost, his successor is constrained to build it again anew, to his great charge. Yea, many times also the house that stood one man in much money, another is of so nice and so delicate a mind that he setteth nothing by it. And it being neglected, and therefore falling shortly into ruin, he buildeth up another in another place with no less cost and charge. But among the Utopians, where all things be set in good order and the commonwealth in a good stay, it very seldom chanceth that they choose a new plot to build an house upon. And they do not only find speedy and quick remedies for present faults, but also prevent them that be like to fall. And by this means their houses continue and last very long with little labour and small reparations, insomuch that that kind of workmen sometimes have almost nothing to do; but that they be commanded to hew timber at home, and to square and trim up stones, to the intent that if any work chance, it may the more speedily rise.

Now, Sir, in their apparel, mark, I pray you, how few workmen they need. First of all, whiles they be at work, they be covered homely with leather or skins that will last seven years. When they go forth abroad, they cast upon them a cloak which hideth the other homely apparel. These cloaks throughout the whole island be all of one colour, and that is the natural colour of the wool. They therefore do not only spend much less woollen cloth than is spent in other countries, but also the same standeth them in much less cost. But linen cloth is made with less labour, and is therefore had more in use. But in linen cloth only whiteness, in woollen only cleanliness, is regarded. As for the smallness or fineness of the thread, that is no thing passed for. And this is the cause wherefore in other places four or five cloth gowns of divers colours, and as many silk coats, be not enough for one man. Yea, and if he be of the delicate and nice sort, ten be too few, whereas their one

³Every ten syphogrants with their thirty families were under an officer called in their language "tranibore."

⁴Latin, *Ademus*, without a people.

garment will serve a man most commonly two years. For why should he desire more? seeing if he had them, he should not be the better hapt or covered from cold, neither in his apparel any whit the comelier.

Wherefore, seeing they be all exercised in profitable occupations, and that few artificers in the same crafts be sufficient, this is the cause that, plenty of all things being among them, they do sometimes bring forth an innumerable company of people to amend the highways, if any be broken. Many times also, when they have no such work to be occupied about, an open proclamation is made that they shall bestow fewer hours in work. For the magistrates do not exercise their citizens against their wills in unneedful labours. For why? in the institution of that weal publique this end is only and chiefly pretended and minded, that what time may possibly be spared from the necessary occupations and affairs of the commonwealth, all that the citizens should withdraw from the bodily service to the free liberty of the mind and garnishing of the same. For herein they suppose the felicity of this life to consist.

IN BROBDINGNAG¹

Jonathan Swift

THE King, who, as I before observed, was a prince of excellent understanding, would frequently order that I should be brought in my box, and set upon the table in his closet. He would then command me to bring one of my chairs out of the box, and sit down within three yards distance upon the top of the cabinet, which brought me almost to a level with his face. In this manner I had several conversations with him. I one day took the freedom to tell his Majesty, that the contempt he discovered towards Europe, and the rest of the world, did not seem answerable to those excellent qualities of the mind he was master of. That reason did not extend itself with the bulk of the body: on the contrary, we observed in our country that the tallest persons were usually least provided with it. That among other animals, bees and ants had the reputation of more industry, art and sagacity, than many of the larger kinds. And that, as inconsiderable as he took me to be, I hoped I might live to do his Majesty some signal service. The King heard me with attention, and began to conceive a much better opinion of me than he had ever before. He desired I would give him as exact an account of the government of England as I possibly could; because, as fond as princes

¹From "A Voyage to Brobdingnag," in *Gulliver's Travels* by Jonathan Swift (1726).

commonly are of their own customs (for so he conjectured of other monarchs, by my former discourses), he should be glad to hear of anything that might deserve imitation.

Imagine with thyself, courteous reader, how often I then wished for the tongue of Demosthenes or Cicero, that might have enabled me to celebrate the praise of my own dear native country in a style equal to its merits and felicity.

I began my discourse by informing his Majesty that our dominions consisted of two islands, which composed three mighty kingdoms under one sovereign, beside our plantations in America. I dwelt long upon the fertility of our soil, and the temperature of our climate. I then spoke at large upon the constitution of an English Parliament, partly made up of an illustrious body called the House of Peers, persons of the noblest blood, and of the most ancient and ample patrimonies. I described that extraordinary care always taken of their education in arts and arms, to qualify them for being counsellors born to the king and kingdom, to have a share in the legislature, to be members of the highest Court of Judicature, from whence there could be no appeal, and to be champions always ready for the defence of their prince and country, by their valour, conduct, and fidelity. That these were the ornament and bulwark of the kingdom, worthy followers of their most renowned ancestors, whose honour had been the reward of their virtue, from which their posterity were never once known to degenerate. To these were joined several holy persons, as part of that assembly, under the title of Bishops, whose peculiar business it is to take care of religion, and of those who instruct the people therein. These were searched and sought out through the whole nation, by the prince and his wisest counsellors, among such of the priesthood as were most deservedly distinguished by the sanctity of their lives, and the depth of their erudition; who were indeed the spiritual fathers of the clergy and the people.

That the other part of the Parliament consisted of an assembly called the House of Commons, who were all principal gentlemen, freely picked and culled out by the people themselves, for their great abilities and love of their country, to represent the wisdom of the whole nation. And these two bodies make up the most august assembly in Europe, to whom, in conjunction with the prince, the whole legislature is committed.

I then descended to the Courts of Justice, over which the Judges, those venerable sages and interpreters of the law, presided, for determining the disputed rights and properties of men, as well as for the punishment of vice, and protection of innocence. I mentioned the prudent management of our treasury; the valour and achievements of our forces by sea and land. I com-

puted the number of our people, by reckoning how many millions there might be of each religious sect, or political party among us. I did not omit even our sports and pastimes, or any other particular which I thought might redound to the honour of my country. And I finished all with a brief historical account of affairs and events in England for about an hundred years past.

This conversation was not ended under five audiences, each of several hours, and the King heard the whole with great attention, frequently taking notes of what I spoke, as well as memorandums of several questions he intended to ask me.

When I had put an end to these long discourses, his Majesty in a sixth audience, consulting his notes, proposed many doubts, queries, and objections, upon every article. He asked what methods were used to cultivate the minds and bodies of our young nobility, and in what kind of business they commonly spent the first and teachable part of their lives. What course was taken to supply that assembly when any noble family became extinct. What qualifications were necessary in those who were to be created new lords. Whether the humour of the prince, a sum of money to a court lady, or a prime minister, or a design of strengthening a party opposite to the public interest, ever happened to be motives in those advancements. What share of knowledge these lords had in the laws of their country, and how they came by it, so as to enable them to decide the properties of their fellow-subjects in the last resort. Whether they were always so free from avarice, partialities, or want, that a bribe, or some other sinister view, could have no place among them. Whether those holy lords I spoke of were always promoted to that rank upon account of their knowledge in religious matters, and the sanctity of their lives, had never been compliers with the times while they were common priests, or slavish prostitute chaplains to some nobleman, whose opinions they continued servilely to follow after they were admitted into that assembly.

He then desired to know what arts were practised in electing those whom I called commoners: whether a stranger with a strong purse might not influence the vulgar voters to choose him before their own landlord, or the most considerable gentleman in the neighbourhood. How it came to pass, that people were so violently bent upon getting into this assembly, which I allowed to be a great trouble and expense, often to the ruin of their families, without any salary or pension: because this appeared such an exalted strain of virtue and public spirit, that his Majesty seemed to doubt it might possibly not be always sincere: and he desired to know whether such zealous gentlemen could have any views of refunding themselves for the charges and trouble they were at, by sacrificing the public good to the designs of a weak and vicious prince in conjunction with a corrupted ministry. He multiplied his

questions, and sifted me thoroughly upon every part of this head, proposing numberless enquiries and objections, which I think it not prudent or convenient to repeat.

Upon what I said in relation to our Courts of Justice, his Majesty desired to be satisfied in several points: and this I was the better able to do, having been formerly almost ruined by a long suit in chancery, which was decreed for me with costs. He asked, what time was usually spent in determining between right and wrong, and what degree of expense. Whether advocates and orators had liberty to plead in causes manifestly known to be unjust, vexatious, or oppressive. Whether party in religion or politics were observed to be of any weight in the scale of justice. Whether those pleading orators were persons educated in the general knowledge of equity, or only in provincial, national, and other local customs. Whether they or their judges had any part in penning those laws which they assumed the liberty of interpreting and glossing upon at their pleasure. Whether they had ever at different times pleaded for and against the same cause, and cited precedents to prove contrary opinions. Whether they were a rich or a poor corporation. Whether they received any pecuniary reward for pleading or delivering their opinions. And particularly whether they were ever admitted as members in the lower senate.

He fell next upon the management of our treasury; and said he thought my memory had failed me, because I computed our taxes at about five or six millions a year, and when I came to mention the issues, he found they sometimes amounted to more than double; for the notes he had taken were very particular in this point, because he hoped, as he told me, that the knowledge of our conduct might be useful to him, and he could not be deceived in his calculations. But, if what I told him were true, he was still at a loss how a kingdom could run out of its estate like a private person. He asked me, who were our creditors; and where we should find money to pay them. He wondered to hear me talk of such chargeable and expensive wars; that certainly we must be a quarrelsome people, or live among very bad neighbours, and that our generals must needs be richer than our kings. He asked what business we had out of our own islands, unless upon the score of trade or treaty, or to defend the coasts with our fleet. Above all, he was amazed to hear me talk of a mercenary standing army in the midst of peace, and among a free people. He said, if we were governed by our own consent in the persons of our representatives, he could not imagine of whom we were afraid, or against whom we were to fight; and would hear my opinion, whether a private man's house might not better be defended by himself, his children, and family, than by half a dozen rascals picked up at a venture in the streets, for small wages, who might get an hundred times more by cutting their throats.

He laughed at my odd kind of arithmetic (as he was pleased to call it) in reckoning the numbers of our people by a computation drawn from the several sects among us in religion and politics. He said he knew no reason why those who entertain opinions prejudicial to the public should be obliged to change, or should not be obliged to conceal them. And as it was tyranny in any government to require the first, so it was weakness not to enforce the second: for a man may be allowed to keep poisons in his closet, but not to vend them about for cordials.

He observed that among the diversions of our nobility and gentry I had mentioned gaming. He desired to know at what age this entertainment was usually taken up, and when it was laid down; how much of their time it employed; whether it ever went so high as to affect their fortunes; whether mean, vicious people, by their dexterity in that art, might not arrive at great riches, and sometimes keep our very nobles in dependence, as well as habituate them to vile companions, wholly take them from the improvement of their minds, and force them, by the losses they have received, to learn and practise that infamous dexterity upon others.

He was perfectly astonished with the historical account I gave him of our affairs during the last century, protesting it was only an heap of conspiracies, rebellions, murders, massacres, revolutions, banishments, the very worst effects that avarice, faction, hypocrisy, perfidiousness, cruelty, rage, madness, hatred, envy, lust, malice, or ambition could produce.

His Majesty in another audience was at the pains to recapitulate the sum of all I had spoken, compared the questions he made with the answers I had given, then taking me into his hands, and stroking me gently, delivered himself in these words, which I shall never forget nor the manner he spoke them in: My little friend Grildrig,² you have made a most admirable panegyric upon your country; you have clearly proved that ignorance, idleness, and vice, may be sometimes the only ingredients for qualifying a legislator; that laws are best explained, interpreted, and applied by those whose interest and abilities lie in perverting, confounding, and eluding them. I observe among you some lines of an institution, which in its original might have been tolerable, but these half erased, and the rest wholly blurred and blotted by corruptions. It doth not appear from all you have said, how any one virtue is required towards the procurement of any one station among you; much less that men are ennobled on account of their virtue, that priests are advanced for their piety or learning, soldiers for their conduct or valour, judges for their in-

²The name given to Gulliver by the child who cared for him in Brobdingnag. According to Swift, "The word imports what the Latins call *manunculus*, the Italians *homunculetina*, and the English *mannikin*."

tegrity, senators for the love of their country, or counsellors for their wisdom. As for yourself (continued the King) who have spent the greatest part of your life in travelling, I am well disposed to hope you may hitherto have escaped many vices of your country. But by what I have gathered from your own relation, and the answers I have with much pains wringed and extorted from you, I cannot but conclude the bulk of your natives to be the most pernicious race of little odious vermin that nature ever suffered to crawl upon the surface of the earth.

ON DEMOCRACY¹

Thomas Carlyle

. . . WHAT *is* Democracy; this huge inevitable Product of the Destinies, which is everywhere the portion of our Europe in these latter days? There lies the question for us. Whence comes it, this universal big black Democracy; whither tends it; what is the meaning of it? A meaning it must have, or it would not be here. If we can find the right meaning of it, we may, wisely resisting and controlling, still hope to live in the midst of it; if we cannot find the right meaning, if we find only the wrong or no meaning in it, to live will not be possible! The whole social wisdom of the Present Time is summoned, in the name of the Giver of Wisdom, to make clear to itself, and lay deeply to heart with an eye to strenuous valiant practice and effort, what the meaning of this universal revolt of the European populations, which calls itself Democracy, and decides to continue permanent, may be.

Certainly it is a drama full of action, event fast following event; in which curiosity finds endless scope, and there are interests at stake, enough to rivet the attention of all men, simple and wise. Whereat the idle multitude lift up their voices, gratulating, celebrating sky-high; in rhyme and prose announcement, more than plentiful, that *now* the New Era, and long-expected Year One of Perfect Human Felicity has come. Glorious and immortal people, sublime French citizens, heroic barricades; triumph of civil and religious liberty—O Heaven! one of the inevitablest private miseries, to an earnest man in such circumstances, is this multitudinous efflux of oratory and psalmody, from the universal foolish human throat; drowning for the moment all reflection whatsoever, except the sorrowful one that you are fallen in an evil, heavy-laden, long-eared age, and must resignedly bear your part in the same. The front wall of your wretched old crazy dwelling, long de-

¹From the first of the *Latter-Day Pamphlets* by Thomas Carlyle (1850).

nounced by you to no purpose, having at last fairly folded itself over, and fallen prostrate into the street, the floors, as may happen, will still hang on by the mere beam-ends, and coherency of old carpentry, though in a sloping direction, and depend there till certain poor rusty nails and worm-eaten dovetailings give way:—but is it cheering, in such circumstances, that the whole household burst forth into celebrating the new joys of light and ventilation, liberty and picturesqueness of position, and thank God that now they have got a house to their mind? My dear household, cease singing and psalmodying; lay aside your fiddles, take out your work-implements, if you have any; for I can say with confidence the laws of gravitation are still active, and rusty nails, worm-eaten dovetailings, and secret coherency of old carpentry, are not the best basis for a household! In the lanes of Irish cities, I have heard say, the wretched people are sometimes found living, and perilously boiling their potatoes, on such swing-floors and inclined planes hanging on by the joist-ends; but I did not hear that they sang very much in celebration of such lodging. No, they slid gently about, sat near the back wall, and perilously boiled their potatoes, in silence for most part!

High shouts of exultation, in every dialect, by every vehicle of speech and writing, rise from far and near over this last avatar² of Democracy in 1848: and yet, to wise minds, the first aspect it presents seems rather to be one of boundless misery and sorrow. What can be more miserable than this universal hunting out of the high dignitaries, solemn functionaries, and potent, grave, and reverend signiors of the world; this stormful rising up of the inarticulate dumb masses everywhere, against those who pretended to be speaking for them and guiding them? These guides, then, were mere blind men only pretending to see? These rulers were not ruling at all; they had merely got on the attributes and clothes of rulers, and were surreptitiously drawing the wages, while the work remained undone? The Kings were Sham-Kings, play-acting as at Drury Lane;—and what were the people withal that took them for real? . . .

Democracy, once modelled into suffrages, furnished with ballot-boxes and such-like, will itself accomplish the salutary universal change from Delusive to Real, and make a new blessed world of us by and by? To the great mass of men, I am aware, the matter presents itself quite on this hopeful side. Democracy they consider to be a kind of "Government." The old model, formed long since, and brought to perfection in England now two hundred years ago, has proclaimed itself to all Nations as the new healing for every woe: "Set up a Parliament," the Nations everywhere say, when the old King is detected to be a Sham-King, and hunted out or not; "set up a Parliament;

²Extraordinary appearance.

let us have suffrages, universal suffrages; and all either at once or by due degrees will be right, and a real Millennium come." Such is their way of construing the matter.

Such, alas, is by no means my way of construing the matter; if it were, I should have had the happiness of remaining silent, and been without call to speak here. It is because the contrary of all this is deeply manifest to me, and appears to be forgotten by multitudes of my contemporaries, that I have had to undertake addressing a word to them. The contrary of all this;—and the farther I look into the roots of all this, the more hateful, ruinous, and dismal does the state of mind all this could have originated in appear to me. To examine this recipe of a Parliament, how fit it is for governing Nations, nay how fit it may now be, in these new times, for governing England itself where we are used to it so long: this, too, is an alarming inquiry, to which all thinking men, and good citizens of their country, who have an ear for the small still voices and eternal intimations, across the temporary clamours and loud blaring proclamations, are now solemnly invited. Invited by the rigorous fact itself; which will one day, and that perhaps soon, demand practical decision or redecision of it from us,—with enormous penalty if we decide it wrong! I think we shall all have to consider this question, one day; better perhaps now, than later, when the leisure may be less. If a Parliament, with suffrages and universal or any conceivable kind of suffrages, *is* the method, then certainly let us set about discovering the kind of suffrages, and rest no moment till we have got them. But it is possible a Parliament may not be the method! Possible the inveterate notions of the English People may have settled it as the method, and the Everlasting Laws of Nature may have settled it as not the method! Not the whole method; not the method at all, if taken as the whole? If a Parliament with never such suffrages is *not* the method settled by this latter authority, then it will urgently behove us to become aware of the fact, and to quit such methods;—we may depend upon it, however unanimous *we* be, every step taken in that direction will, by the Eternal Law of things, be a step *from* improvement, not towards it.

Not towards it, I say, if so! Unanimity of voting,—that will do nothing for us if *so*. Your ship cannot double Cape Horn by its excellent plans of voting. The ship may vote this and that, above decks and below, in the most harmonious exquisitely constitutional manner: the ship, to get round Cape Horn, will find a set of conditions already voted for, and fixed with adamantine rigour by the ancient Elemental Powers, who are entirely careless how you vote. If you can, by voting or without voting, ascertain these conditions, and valiantly conform to them, you will get round the Cape: if you cannot,—the ruffian Winds will blow you ever back again; the inexorable Icebergs,

dumb privy-counselors from Chaos, will nudge you with most chaotic "admonition"; you will be flung half-frozen on the Patagonian cliffs, or admonished into shivers by your iceberg councilors, and sent sheer down to Davy Jones, and will never get round Cape Horn at all! Unanimity on board ship;—yes indeed, the ship's crew may be very unanimous, which doubtless, for the time being, will be very comfortable to the ship's crew, and to their Phantasm Captain if they have one: but if the tack they unanimously steer upon is guiding them into the belly of the Abyss, it will not profit them much! Ships accordingly, do not use the ballot-box at all; and they reject the Phantasm species of Captains: one wishes much some other Entities,—since all entities lie under the same rigorous set of laws,—could be brought to show as much wisdom, and sense at least of self-preservation, the *first* command of Nature. Phantasm Captains with unanimous votings: this is considered to be all the law and all the prophets at present.

A divine message, or eternal regulation of the Universe, there verily is, in regard to every conceivable procedure and affair of man: faithfully following this, said procedure or affair will prosper, and have the whole Universe to second it, and carry it, across the fluctuating contradictions, towards a victorious goal; not following this, mistaking this, disregarding this, destruction and wreck are certain for every affair. How find it? All the world answers me, "Count heads; ask Universal Suffrage, by the ballot-boxes, and that will tell." Universal Suffrage, ballot-boxes, count of heads? Well,—I perceive we have got into strange spiritual latitudes indeed. Within the last half century or so, either the Universe or else the heads of men must have altered very much. Half a century ago, and down from Father Adam's time till then, the Universe, wherever I could hear tell of it, was wont to be of somewhat abstruse nature: by no means carrying its secret written on its face, legible to every passer-by; on the contrary, obstinately hiding its secret from all foolish, slavish, wicked, insincere persons, and partially disclosing it to the wise and noble-minded alone, whose number was not the majority in my time! . . .

Historically speaking, I believe there was no Nation that could subsist upon Democracy. Of ancient Republics, and *Demoi* and *Populi*, we have heard much; but it is now pretty well admitted to be nothing to our purpose;—a universal-suffrage republic, or a general-suffrage one, or any but a most-limited-suffrage one, never came to light, or dreamed of doing so in ancient times. When the mass of the population were slaves, and the voters intrinsically a kind of *kings*, or men born to rule others; when the voters were *real* "aristocrats" and manageable dependents of such,—then doubtless voting, and confused jumbling of talk and intrigue, might, without immediate destruction, or the need of a Cavaignac to intervene with cannon and sweep the streets clear

of it, go on; and beautiful developments of manhood might be possible beside it, for a season. Beside it; or even, if you will, by means of it, and in virtue of it, though that is by no means so certain as is often supposed. Alas, no: the reflective constitutional mind has misgivings as to the origin of old Greek and Roman nobleness; and indeed knows not how this or any other human nobleness could well be "originated," or brought to pass, by voting or without voting, in this world, except by the grace of God very mainly;—and remembers, with a sigh, that of the Seven Sages themselves no fewer than three were bits of Despotical Kings, Τύραννοι, "Tyrants" so-called (such being greatly wanted there); and that the other four were very far from Red Republicans, if of any political faith whatever! We may quit the Ancient Classical concern, and leave it to College clubs and speculative debating societies, in these late days.

Of the various French Republics that have been tried, or that are still on trial,—of these also it is not needful to say any word. But there is one modern instance of Democracy nearly perfect, the Republic of the United States, which has actually subsisted for threescore years or more, with immense success as is affirmed; to which many still appeal, as to a sign of hope for all nations, and a "Model Republic." Is not America an instance in point? Why should not all Nations subsist and flourish on Democracy, as America does?

Of America it would ill beseem any Englishman, and me perhaps as little as another, to speak unkindly, to speak *unpatriotically*, if any of us even felt so. Sure enough, America is a great, and in many respects a blessed and hopeful phenomenon. Sure enough, these hardy millions of Anglo-Saxon men prove themselves worthy of their genealogy; and, with the axe and plough and hammer, if not yet with any much finer kind of implements, are triumphantly clearing out wide spaces, seedfields for the sustenance and refuge of mankind, arenas for the future history of the world; doing, in their day and generation, a creditable and cheering feat under the sun. But as to a Model Republic, or a model anything, the wise among themselves know too well that there is nothing to be said. Nay the title hitherto to be a Commonwealth or Nation at all, among the ἔθνη³ of the world, is, strictly considered, still a thing they are but striving for, and indeed have not yet done much towards attaining. Their Constitution, such as it may be, was made here, not there; went over with them from the Old Puritan English workshop ready-made. Deduct what they carried with them from England ready-made,—their common English Language, and that same Constitution, or rather elixir of constitutions, their inveterate and now, as it were, inborn reverence for the Constable's Staff; two quite immense attainments, which England had to spend much blood, and valiant sweat of blood and brain, for centuries long, in achieving;—and what new elements

³Races.

of polity or nationhood, what noble new phasis of human arrangement, or social device worthy of Prometheus or of Epimetheus,⁴ yet comes to light in America? Cotton-crops and Indian corn and dollars come to light; and half a world of untilled land, where populations that respect the constable can live, for the present *without* Government: this comes to light; and the profound sorrow of all nobler hearts, here uttering itself as silent patient unspeakable ennui, there coming out as vague elegiac wailings, that there is still next to nothing more. "Anarchy *plus* a street-constable": that also is anarchic to me, and other than quite lovely!

I foresee, too, that, long before the waste lands are full, the very street-constable, on these poor terms, will have become impossible: without the waste lands, as here in our Europe, I do not see how he could continue possible many weeks. Cease to brag to me of America, and its model institutions and constitutions. To men in their sleep there is nothing granted in this world: nothing, or as good as nothing, to men that sit idly *caucusing* and ballot-boxing on the graves of their heroic ancestors, saying, "It is well, it is well!" Corn and bacon are granted: not a very sublime boon, on such conditions; a boon moreover which, on such conditions, cannot last! No: America too will have to strain its energies, in quite other fashion than this; to crack its sinews, and all but break its heart, as the rest of us have had to do, in thousandfold wrestle with the Pythons and mud-demons, before it can become a habitation for the gods. America's battle is yet to fight; and we, sorrowful though nothing doubting, will wish her strength for it. New Spiritual Pythons, plenty of them; enormous Megatherions, as ugly as were ever born of mud, loom huge and hideous out of the twilight Future on America; and she will have her own agony, and her own victory, but on other terms than she is yet quite aware of. Hitherto she but ploughs and hammers, in a very successful manner; hitherto, in spite of her "roast-geese with apple-sauce," she is not much. "Roast-geese with apple-sauce for the poorest working-man": well, surely that is something,—thanks to your respect for the street-constable, and to your continents of fertile waste land;—but that, even if it could continue, is by no means enough; that is not even an instalment towards what will be required of you. My friend, brag not yet of our American cousins! Their quantity of cotton, dollars, industry and resources, I believe to be almost unspeakable; but I can by no means worship the like of these. What great human soul, what great thought, what great noble thing that one could worship, or loyally admire, has yet been produced there? None: the American cousins have yet done none of these things. "What have they done?" growls Smelfungus,⁵ tired of the subject:

⁴Brother of Prometheus.

⁵A nickname for a pessimistic grumbler. Used originally by Sterne in *Tobias Smollett*.

"They have doubled their population every twenty years. They have begotten, with a rapidity beyond recorded example, Eighteen Millions of the greatest *bores* ever seen in this world before,—that hitherto is their feat in History!"—And so we leave them, for the present; and cannot predict the success of Democracy, on this side of the Atlantic, from their example.

Alas, on this side of the Atlantic and on that, Democracy, we apprehend, is forever impossible! So much, with certainty of loud astonished contradiction from all manner of men at present, but with sure appeal to the Law of Nature and the ever-abiding Fact, may be suggested and asserted once more. The Universe itself is a Monarchy and Hierarchy; large liberty of "voting" there, all manner of choice, utmost free-will, but with conditions inexorable and immeasurable annexed to every exercise of the same. A most free commonwealth of "voters"; but with Eternal Justice to preside over it, Eternal Justice enforced by Almighty Power! This is the model of "constitutions"; this: nor in any Nation where there has not yet (in some supportable and withal some constantly increasing degree) been confided to the *Noblest*, with his select series of *Nobler*, the divine everlasting duty of directing and controlling the Ignoble, has the "Kingdom of God," which we all pray for, "come," nor can "His will" even *tend* to be "done on Earth as it is in Heaven" till then. My Christian friends, and indeed my Sham-Christian and Anti-Christian, and all manner of men, are invited to reflect on this. They will find it to be the truth of the case. The Noble in the high place, the Ignoble in the low; that is, in all times and in all countries, the Almighty Maker's Law.

To raise the Sham-Noblest, and solemnly consecrate *him* by whatever method, new-devised, or slavishly adhered to from old wont, this, little as we may regard it, is in all times and countries, a practical blasphemy, and Nature will in no wise forget it. Alas, there lies the origin, the fatal necessity, of modern Democracy everywhere. It is the Noblest, not the Sham-Noblest; it is God-Almighty's Noble, not the Court-Tailor's Noble, nor the Able-Editor's Noble, that must in some approximate degree be raised to the supreme place; he and not a counterfeit,—under penalties! Penalties deep as death, and at length terrible as hell-on-earth, my constitutional friend! Will the ballot-box raise the Noblest to the chief place; does any sane man deliberately believe such a thing? That nevertheless is the indispensable result, attain it how we may: if this is attained, all is attained; if not that, nothing. He that cannot believe the ballot-box to be attaining it, will be comparatively indifferent to the ballot-box. Excellent for keeping the ship's crew at peace under their Phantasm Captain; but unserviceable, under such, for getting round Cape Horn. Alas, that there should be human beings requiring to have these things argued of, at this late time of day!

I say, it is the everlasting privilege of the foolish to be governed by the wise; to be guided in the right path by those who know it better than they. This is the first "right of man"; compared with which all other rights are as nothing,—mere superfluities, corollaries which will follow of their own accord out of this; if they be not contradictions to this, and less than nothing! . . .

One thing I do know, and can again assert with great confidence, supported by the whole Universe, and by some two hundred generations of men, who have left us some record of themselves there, That the few Wise will have, by one method or another, to take command of the innumerable Foolish; that they must be got to take it;—and that, in fact, since Wisdom, which means also Valour and heroic Nobleness, is alone strong in this world, and one wise man is stronger than all men unwise, they can be got. That they must take it; and having taken, must keep it, and do their God's-Messsage in it, and defend the same, at their life's peril, against all men and devils. This I do clearly believe to be the backbone of all Future Society, as it has been of all Past; and that without it, there is no Society possible in the world. And what a business *this* will be, before it end in some degree of victory again, and whether the time for shouts of triumph and tremendous cheers upon it is yet come, or not yet by a great way, I perceive too well! A business to make us all very serious indeed. A business not to be accomplished but by noble manhood, and devout all-daring, all-enduring loyalty to Heaven, such as fatally *sleeps* at present,—such as is not *dead* at present either, unless the gods have doomed this world of theirs to die! . . .

THE TAMING OF POWER¹

Bertrand Russell

‘IN PASSING by the side of a Mount Thai, Confucius came on a woman who was weeping bitterly by a grave. The Master pressed forward and drove quickly to her; then he sent Tze-lu to question her. “Your wailing,” said he, “is that of one who has suffered sorrow on sorrow.” She replied, “That is so. Once my husband’s father was killed here by a tiger. My husband was also killed, and now my son has died in the same way.” The Master said, “Why do you not leave the place?” The answer was, “There is no oppressive government here.” The Master then said, “Remember this, my children: oppressive government is more terrible than tigers.”’

The subject of this paper is the problem of ensuring that government shall be *less* terrible than tigers.

The problem of the taming of power is, as the above quotation shows, a very ancient one. The Taoists thought it insoluble, and advocated anarchism; the Confucians trusted to a certain ethical and governmental training which should turn the holders of power into sages endowed with moderation and benevolence. At the same period, in Greece, democracy, oligarchy, and tyranny were contending for mastery; democracy was intended to check abuses of power, but was perpetually defeating itself by falling a victim to the temporary popularity of some demagogue. Plato, like Confucius, sought the solution in a government of men trained to wisdom. This view has been revived by Mr. and Mrs. Sidney Webb, who admire an oligarchy in which power is confined to those who have the ‘vocation of leadership.’ In the interval between Plato and the Webbs, the world has tried military autocracy, theocracy, hereditary monarchy, oligarchy, democracy, and the Rule of the Saints—the last of these, after the failure of Cromwell’s experiment, having been revived in our day by Lenin, Mussolini, and Hitler. All this suggests that our problem has not yet been solved.

To anyone who studies either history or human nature, it must be evident that democracy, while not a complete solution, is an essential part of the solution. The complete solution is not to be found by confining ourselves to political conditions; we must take account also of economics, of propaganda, and of psychology as affected by circumstances and education. Our subject thus divides itself into four parts: (1) political conditions, (2) economic conditions, (3) propaganda conditions, and (4) psychological and educational conditions. Let us take these in succession.

The merits of democracy are negative: it does not ensure good government,

¹From *Power* by Bertrand Russell (1938), published by W. W. Norton & Company, Inc.

but it prevents certain evils. Until women began to take part in political affairs, married women had no control over their own property, or even over their own earnings; a charwoman with a drunken husband had no redress if he prevented her from using her wages for the support of her children. The oligarchical Parliament of the eighteenth and early nineteenth centuries used its legislative power to increase the wealth of the rich by depressing the condition of both rural and urban labor. Only democracy has prevented the law from making trade-unionism impossible. But for democracy, Western America, Australia, and New Zealand would be inhabited by a semi-servile yellow population governed by a small white aristocracy. The evils of slavery and serfdom are familiar, and wherever a minority has a secure monopoly of political power the majority is likely to sink, sooner or later, into either slavery or serfdom. All history shows that, as might be expected, minorities cannot be trusted to care for the interests of majorities.

There is a tendency, as strong now as at any former time, to suppose that an oligarchy is admirable if it consists of 'good' men. The government of the Roman Empire was 'bad' until Constantine, and then it became 'good.' In the Book of Kings, there were those who did right in the sight of the Lord, and those who did evil. In English history as taught to children, there are 'good' kings and 'bad' kings. An oligarchy of Jews is 'bad,' but one of Nazis is 'good.' The oligarchy of Tsarist aristocrats was 'bad,' but that of the Communist Party is 'good.'

This attitude is unworthy of grown-up people. A child is 'good' when it obeys orders, and 'naughty' when it does not. When it grows up and becomes a political leader, it retains the ideas of the nursery, and defines the 'good' as those who obey its orders and the 'bad' as those who defy it.

Such a point of view, if taken seriously, makes social life impossible. Only force can decide which group is 'good' and which 'bad,' and the decision, when made, may at any moment be upset by an insurrection. Neither group, if it attains power, will care for the interests of the other, except in so far as it is controlled by the fear of rousing rebellion. Social life, if it is to be anything better than tyranny, demands a certain impartiality. But since, in many matters, collective action is necessary, the only practicable form of impartiality, in such matters, is the rule of the majority.

Democracy, however, though necessary, is by no means the only political condition required for the taming of power. It is possible, in a democracy, for the majority to exercise a brutal and wholly unnecessary tyranny over a minority. In the period from 1885 to 1922, the government of the United Kingdom was (except for the exclusion of women) democratic, but that did not prevent the oppression of Ireland. Not only a national, but a religious or

political minority may be persecuted. The safeguarding of minorities, so far as is compatible with orderly government is an essential part of the taming of power.

This requires a consideration of the matters regarding which the community must act as a whole, and those regarding which uniformity is unnecessary. The most obvious questions concerning which a collective decision is imperative are those that are essentially geographical. Roads, railways, sewers, gas mains, and so on, must take one course and not another. Sanitary precautions, say against plague or rabies, are geographical: it would not do for Christian Scientists to announce that they will take no precautions against infection, because they might infect others.

Where there is a geographically concentrated minority, such as the Irish before 1922, it is possible to solve a great many problems by devolution. But when the minority is distributed throughout the area concerned, this method is largely inapplicable. Where Christian and Mohammedan populations live side by side, they have, it is true, different marriage laws, but except where religion is concerned they all have to submit to one government. It has been gradually discovered that theological uniformity is not necessary to a State, and that Protestants and Catholics can live peaceably together under one government. But this was not the case during the first one hundred and thirty years after the Reformation.

The question of the degree of liberty that is compatible with order is one that cannot be settled in the abstract. The only thing that can be said in the abstract is that, where there is no technical reason for a collective decision, there should be some strong reason connected with public order if freedom is to be interfered with. In the reign of Elizabeth, when Roman Catholics wished to deprive her of the throne, it is not surprising that the government viewed them with disfavor. Similarly in the Low Countries, where Protestants were in revolt against Spain, it was to be expected that the Spaniards would persecute them. Nowadays theological questions have not the same political importance. Even political differences, if they do not go too deep, are no reason for persecution. Conservatives, Liberals, and Labor people can all live peaceably side by side, because they do not wish to alter the Constitution by force; but Fascists and Communists are more difficult to assimilate. Where there is democracy, attempts of a minority to seize power by force, and incitements to such attempts, may reasonably be forbidden, on the ground that a law-abiding majority has a right to a quiet life if it can secure it.

I come now to the economic conditions required in order to minimize arbitrary power. This subject is of great importance, both on its own account

and because there has been a very great deal of confusion of thought in relation to it.

Political democracy, while it solves a part of our problem, does not by any means solve the whole. Marx pointed out that there could be no real equalization of power through politics alone, while economic power remained monarchical or oligarchic. It followed that economic power must be in the hands of the State, and that the State must be democratic. Those who profess, at the present day, to be Marx's followers have kept only the half of his doctrine, and have thrown over the demand that the State should be democratic. They have thus concentrated both economic and political power in the hands of an oligarchy, which has become, in consequence, more powerful and more able to exercise tyranny than any oligarchy of former times.

Both old-fashioned democracy and new-fashioned Marxism have aimed at the taming of power. The former failed because it was only political, the latter because it was only economic. Without a combination of both, nothing approaching to a solution of the problem is possible.

The arguments in favor of state ownership of land and the large economic organizations are partly technical, partly political. The technical arguments have not been much stressed except by the Fabian Society, and to some extent in America in connection with such matters as the Tennessee Valley Authority. Nevertheless they are very strong, especially in connection with electricity and water power, and cause even Conservative governments to introduce measures which, from a technical point of view, are socialistic. We have seen how, as a result of modern technique, organizations tend to grow and to coalesce and to increase their scope; the inevitable consequence is that the political State must either increasingly take over economic functions or partially abdicate in favor of vast private enterprises which are sufficiently powerful to defy or control it. If the State does not acquire supremacy over such enterprises, it becomes their puppet, and they become the real State. In one way or another, wherever modern technique exists, economic and political power must become unified. This movement towards unification has the irresistible impersonal character which Marx attributed to the development that he prophesied. But it has nothing to do with the class war or the wrongs of the proletariat.

Socialism as a political movement has aimed at furthering the interests of industrial wage earners; its technical advantages have been kept comparatively in the background. The belief is that the economic power of the private capitalist enables him to oppress the wage earner, and that since the wage earner cannot, like the handicraftsman of former times, individually own his means of production, the only way of emancipating him is collective ownership by the whole body of workers. It is argued that if the private capitalist were ex-

propriated the whole body of the workers would constitute the State; and that consequently the problem of economic power can be solved completely by state ownership of land and capital, and in no other way.

Before examining the argument, I wish to say unequivocally that I consider it valid, provided it is adequately safeguarded and amplified. *Per contra*, in the absence of such safeguarding and amplifying I consider it very dangerous, and likely to mislead those who seek liberation from economic tyranny so completely that they will find they have inadvertently established a new tyranny at once economic and political, more drastic and more terrible than any previously known.

In the first place, 'ownership' is not the same thing as 'control.' If, say, a railway is owned by the State, and the State is considered to be the whole body of the citizens, that does not ensure, of itself, that the average citizen will have any power over the railway. Let us revert, for a moment, to what Messrs. Berle and Means say in *The Modern Corporation and Private Property* about ownership and control in large American corporations. They point out that in the majority of such corporations all the directors together usually own only about one or two per cent of the stock, and yet, in effect, have complete control:—

In the election of the board the stockholder ordinarily has three alternatives. He can refrain from voting, he can attend the annual meeting and personally vote his stock, or he can sign a proxy transferring his voting power to certain individuals selected by the management of the corporation, the proxy committee. As his personal vote will count for little or nothing at the meeting unless he has a very large block of stock, the stockholder is practically reduced to the alternative of not voting at all or else of *handing over his vote to individuals over whom he has no control and in whose selection he did not participate*. In neither case will he be able to exercise any measure of control. Rather, control will tend to be in the hands of those who select the proxy committee. . . . Since the proxy committee is appointed by the existing management, the latter can virtually dictate their own successors.

The helpless individuals described in the above passage are, it should be noted, not proletarians, but capitalists. They are part owners of the corporation concerned, in the sense that they have legal rights which may, with luck, bring them in a certain income; but, owing to their lack of control, the income is very precarious. When I first visited the United States in 1896, I was struck by the enormous number of railways that were bankrupt; on inquiry, I found that this was not due to incompetence on the part of directors, but to skill: the investments of ordinary shareholders had been transferred, by one device or another, to other companies in which the directors had a large interest. This was a crude method, and nowadays matters are usually managed in a

more decorous fashion, but the principle remains the same. In any large corporation, power is necessarily less diffused than ownership, and carries with it advantages which, though at first political, can be made sources of wealth to an indefinite extent. The humble investor can be politely and legally robbed; the only limit is that he must not have such bitter experiences as to lead him to keep his future savings in a stocking.

The situation is in no way essentially different when the State takes the place of a corporation; indeed, since it is the size of the corporation that causes the helplessness of the average stockholder, the average citizen is likely to be still more helpless as against the State. A battleship is public property, but if, on this ground, you try to exercise rights of ownership, you will be soon put in your place. You have a remedy, it is true: at the next General Election you can vote for a candidate who favors a reduction in the Navy Estimates, if you can find one; or you can write to the papers to urge that sailors should be more polite to sight-seers. But more than this you cannot do.

But, it is said, the battleship belongs to a capitalist State, and when it belongs to a workers' State everything will be different. This view seems to me to show a failure to grasp the fact that economic power is now a matter of government rather than ownership. If the United States Steel Corporation, say, were taken over by the United States Government, it would still need men to manage it; they would be either the same men who now manage it or men with similar abilities and a similar outlook. The attitude which they now have towards the shareholders they would then have towards the citizens. True, they would be subject to the government, but, unless it was democratic and responsive to public opinion, it would have a point of view closely similar to that of the officials.

Marxists, having retained, as a result of the authority of Marx and Engels, many ways of thinking that belong to the forties of last century, still conceive of businesses as if they belonged to individual capitalists, and have not learned the lessons to be derived from the separation of ownership and control. The important person is the man who has control of economic power, not the man who has a fraction of the nominal ownership. The Prime Minister does not own No. 10 Downing Street, and Bishops do not own their palaces; but it would be absurd to pretend, on this account, that they are no better off than the average wage earner. Under any form of socialism which is not democratic, those who control economic power can, without 'owning' anything, have palatial official residences, the use of the best cars, a princely entertainment allowance, holidays at the public expense in official holiday resorts, and so on and so on. And why should they have any more concern for the ordinary worker than those in control have now? There can be no reason why

they should have, unless the ordinary worker has power to deprive them of their positions. Moreover the subordination of the small investor in existing large corporations shows how easy it is for the official to overpower the democracy, even when the 'democracy' consists of capitalists.

Not only, therefore, is democracy essential if state ownership and control of economic enterprises are to be in any degree advantageous to the average citizen, but it will have to be an effective democracy and this will be more difficult to secure than it is at present, since the official class will, unless very carefully supervised, combine the powers at present possessed by the government and the men in control of industry and finance, and since the means of agitating against the government will have to be supplied by the government itself, as the sole owner of halls, paper, and all the other essentials of propaganda.

While, therefore, public ownership and control of all large-scale industry and finance is a necessary condition for the taming of power, it is far from being a sufficient condition. It needs to be supplemented by a democracy more thoroughgoing, more carefully safeguarded against official tyranny, and with more careful provision for freedom of propaganda, than any purely political democracy that has ever existed.

I come now to the propaganda conditions for the taming of power. It is obvious that publicity for grievances must be possible; agitation must be free provided it does not incite to breaches of the law; there must be ways of impeaching officials who exceed or abuse their powers. The government of the day must not be in a position to secure its own permanence by intimidation, falsification of the register of electors, or any similar method. There must be no penalty, official or unofficial, for any well-grounded criticism of prominent men. Much of this, at present, is secured by party government in democratic countries, which causes the politicians in power to be objects of hostile criticism by nearly half the nation. This makes it impossible for them to commit many crimes to which they might otherwise be prone.

All this is more important when the State has a monopoly of economic power than it is under capitalism, since the power of the State will be vastly augmented. Take a concrete case: that of women employed in the public service. At present they have a grievance, because their rates of pay are lower than those of men; they have legitimate ways of making their grievance known, and it would not be safe to penalize them for making use of these ways. There is no reason whatever for supposing that the present inequality would necessarily cease with the adoption of socialism, but the means of agitating about it would cease, unless express provision were made for just

such cases. Newspapers and printing presses would all belong to the government, and would print only what the government ordered.

Can it be assumed as certain that the government would print attacks on its own policy? If not, there would be no means of political agitation by way of print. Public meetings would be just as difficult, since the halls would all belong to the government. Consequently, unless careful provision were made for the express purpose of safeguarding political liberty, no method would exist of making grievances known, and the government, when once elected, would be as omnipotent as Hitler, and could easily arrange for its own reelection to the end of time. Democracy might survive as a form, but would have no more reality than the forms of popular government that lingered on under the Roman Empire.

To suppose that irresponsible power, just because it is called Socialist or Communist, will be freed miraculously from the bad qualities of all arbitrary power in the past is mere childish nursery psychology; the wicked prince is ousted by the good prince, and all is well. If a prince is to be trusted, it must be not because he is 'good,' but because it is against his interest to be 'bad.' To ensure that this shall be the case is to make power innocuous; but it cannot be rendered innocuous by transforming men whom we believe to be 'good' into irresponsible despots.

The British Broadcasting Corporation is a state institution which shows what is possible in the way of combining freedom of propaganda with government monopoly. At such a time as that of the General Strike, it must be admitted, it ceases to be impartial; but at ordinary times it represents different points of view, as nearly as may be, in proportion to their numerical strength. In a Socialist State, similar arrangements for impartiality would have to be made in regard to the hiring of halls for meetings and the printing of controversial literature. It might be found desirable, instead of having different newspapers representing different points of view, to have only one, with different pages allocated to different parties. This would have the advantage that readers would see all opinions, and would tend to be less one-sided than those who, at present, never see in a newspaper anything with which they disagree.

There are certain regions, such as art and science, and (so far as public order allows) party politics, where uniformity is not necessary or even desirable. These are the legitimate sphere of competition, and it is important that public feeling should be such as to bear differences on such matters without exasperation. Democracy, if it is to succeed and endure, demands a tolerant spirit, not too much hate, and not too much love of violence. But this brings us to the psychological conditions for the taming of power.

The psychological conditions for the taming of power are in some ways the most difficult. Fear, rage, and all kinds of violent collective excitement tend to make men blindly follow a leader, who in most cases takes advantage of their trust to establish himself as a tyrant. It is therefore important, if democracy is to be preserved, both to avoid the circumstances that produce general excitement and to educate in such a way that the population shall be little prone to moods of this sort. When a spirit of ferocious dogmatism prevails, any opinion with which men disagree is liable to provoke a breach of the peace. Schoolboys are apt to illtreat a boy whose opinions are in any way odd, and many grown men have not got beyond the mental age of schoolboys. A diffused liberal sentiment, tinged with skepticism, makes social cooperation much less difficult, and liberty correspondingly more possible.

Revivalist enthusiasm, such as that of the Nazis, rouses admiration in many through the energy and apparent self-abnegation that it generates. Collective excitement, involving indifference to pain and even to death, is historically not uncommon. Where it exists, liberty is impossible. The enthusiasts can only be restrained by force, and if they are not restrained they will use force against others. I remember a Bolshevik whom I met in Peking in 1920, who marched up and down the room exclaiming with complete truth, 'If vee do not keel zem, zey will keel us!' The existence of this mood on one side of course generates the same mood on the other side; the consequence is a fight to a finish, in which everything is subordinated to victory. During the fight, the government acquires despotic power for military reasons; at the end, if victorious, it uses its power first to crush what remains of the enemy, and then to secure the continuance of its dictatorship over its own supporters. The result is something quite different from what was fought for by the enthusiasts. Enthusiasm, while it can achieve certain results, can hardly ever achieve those that it desires. To admire collective enthusiasm is reckless and irresponsible, for its fruits are fierceness, war, death, and slavery.

War is the chief promoter of despotism, and the greatest obstacle to the establishment of a system in which irresponsible power is avoided as far as possible. The prevention of war is therefore an essential part of our problem—I should say, the most essential. I believe that if once the world were free from the fear of war, under no matter what form of government or what economic system, it would in time find ways of curbing the ferocity of its rulers. On the other hand all war, but especially modern war, promotes dictatorship by causing the timid to seek a leader and by converting the bolder spirits from a society into a pack.

The risk of war causes a certain kind of mass psychology, and reciprocally this kind, where it exists, increases the risk of war, as well as the likelihood of

despotism. We have therefore to consider the kind of education which will make societies least prone to collective hysteria, and most capable of successfully practising democracy.

Democracy, if it is to succeed, needs a wide diffusion of two qualities which seem, at first sight, to tend in opposite directions. On the one hand men must have a certain degree of self-reliance and a certain willingness to back their own judgment; there must be political propaganda in opposite directions, in which many people take part. But on the other hand men must be willing to submit to the decision of the majority when it goes against them. Either of these conditions may fail; the population may be too submissive, and may follow a vigorous leader into dictatorship; or each party may be too self-assertive, with the result that the nation falls into anarchy.

If democracy is to be workable, the population must be as far as possible free from hatred and destructiveness, and also from fear and subservience. These feelings may be caused by political or economic circumstances, but what I want to consider is the part that education plays in making men more or less prone to them.

Some parents and some schools begin with the attempt which is almost bound to produce either a slave or a rebel, neither of which is what is wanted in a democracy. As to the effects of a severely disciplinary education, the view that I hold is held by all the dictators of Europe. After the war, almost all the countries of Europe had a number of free schools, without too much discipline or too much show of respect for the teachers; but one by one the military autocracies, including the Soviet Republic, have suppressed all freedom in schools and have gone back to the old drill, and to the practice of treating the teacher as a miniature Führer or Duce. The dictators, we may infer, all regard a certain degree of freedom in school as the proper training for democracy, and autocracy in school as the natural prelude to autocracy in the State.

Every man and woman in a democracy should be neither a slave nor a rebel, but a citizen—that is, a person who has, and allows to others, a due proportion, but no more, of the governmental mentality. Where democracy does not exist, the governmental mentality is that of masters towards dependents; but where there is democracy it is that of equal cooperation, which involves the assertion of one's own opinion up to a certain point, but no further.

This brings us to a source of trouble to many democrats—namely, what is called 'principle.' Most talk about principle, self-sacrifice, heroic devotion to a cause, and so on, should be scanned somewhat skeptically. A little psycho-analysis will often show that what goes by these fine names is really something quite different, such as pride, or hatred, or desire for revenge, that has become idealized and collectivized and personified as a noble form of idealism. The

warlike patriot, who is willing and even anxious to fight for his country, may reasonably be suspected of a certain pleasure in killing. A kindly population, a population who in their childhood had received kindness and been made happy, and who in youth had found the world a friendly place, would not develop that particular sort of idealism called patriotism, or class war, or what not, which consists in joining together to kill people in large numbers. I think the tendency to cruel forms of idealism is increased by unhappiness in childhood, and would be lessened if early education were emotionally what it ought to be. Fanaticism is a defect which is partly emotional, partly intellectual; it needs to be combated by the kind of happiness that makes men kindly, and the kind of intelligence that produces a scientific habit of mind.

The temper required to make a success of democracy is, in the practical life, exactly what the scientific temper is in the intellectual life; it is a halfway house between skepticism and dogmatism. Truth, it holds, is neither completely attainable nor completely unattainable; it is attainable, to a certain degree, and that only with difficulty.

Autocracy, in its modern forms, is always combined with a creed; that of Hitler, that of Mussolini, or that of Stalin. Wherever there is autocracy, a set of beliefs is instilled into the minds of the young before they are capable of thinking, and these beliefs are taught so constantly and so persistently that it is hoped the pupils will never afterwards be able to escape from the hypnotic effect of their early lessons. The beliefs are instilled, not by giving any reason for supposing them true, but by parrotlike repetition, by mass hysteria and mass suggestion. When two opposite creeds have been taught in this fashion, they produce two armies which clash, not two parties that can discuss. Each hypnotized automaton feels that everything most sacred is bound up with the victory of his side, everything most horrible exemplified by the other side. Such fanatical factions cannot meet in Parliament and say, 'Let us see which side has the majority'; that would be altogether too pedestrian, since each side stands for a sacred cause. This sort of dogmatism must be prevented if dictatorships are to be avoided, and measures for preventing it ought to form an essential part of education.

If I had control of education, I should expose children to the most vehement and eloquent advocates on all sides of every topical question, who should speak to the schools from the B.B.C. The teacher should afterwards invite the children to summarize the arguments used, and should gently insinuate the view that eloquence is inversely proportional to solid reason. To acquire immunity to eloquence is of the utmost importance to the citizens of a democracy.

Modern propagandists have learned from advertisers, who led the way in the technique of producing irrational belief. Education should be designed

to counteract the natural credulity and the natural incredulity of the uneducated; the habit of believing an emphatic statement without reasons, and of disbelieving an unemphatic statement even when accompanied by the best of reasons. I should begin in the infant school, with two classes of sweets between which the children should choose; one very nice, recommended by a coldly accurate statement as to its ingredients; the other very nasty, recommended by the utmost skill of the best advertisers. A little later I should give them a choice of two places for a country holiday; a nice place recommended by a contour map, and an ugly place recommended by magnificent posters.

The teaching of history ought to be conducted in a similar spirit. There have been in the past eminent orators and writers who defended, with an appearance of great wisdom, positions which no one now holds: the reality of witchcraft, the beneficence of slavery, and so on. I should cause the young to know such masters of eloquence, and to appreciate at once their rhetoric and their wrong-headedness. Gradually I should pass on to current questions. As a sort of *bonne bouche* to their history, I should read to them what is said about Spain (or whatever at the moment is most controversial), first by the *Daily Mail*, then by the *Daily Worker*; and I should then ask them to infer what really happened. For undoubtedly few things are more useful to a citizen of a democracy than skill in detecting, by reading newspapers, what it was that took place. For this purpose it would be instructive to compare the newspapers at crucial moments during the Great War with what subsequently appeared in the official history. And when the madness of war hysteria, as shown in the newspapers of the time, strikes your pupils as incredible, you should warn them that all of them, unless they are very careful to cultivate a balanced and cautious judgment, may fall overnight into a similar madness at the first touch of government incitement to terror and blood lust.

I do not wish, however, to preach a purely negative emotional attitude. I am not suggesting that all strong feelings should be subjected to destructive analysis. I am advocating this attitude only in relation to those emotions which are the basis of collective hysteria, for it is collective hysteria that facilitates wars and dictatorships. But wisdom is not *merely* intellectual: Intellect may guide and direct, but does not generate the force that leads to action. The force must be derived from the emotions. Emotions that have desirable social consequences are not so easily generated as hate and rage and fear. In their creation, much depends upon early childhood; much, also, upon economic circumstances. Something, however, can be done, in the course of ordinary education, to provide the nourishment upon which the better emotions can grow, and to bring about the realization of what may give value to human life.

This has been, in the past, one of the purposes of religion. The churches,

however, have also had other purposes, and their dogmatic basis causes difficulties. For those to whom traditional religion is no longer possible, there are other ways. Some find what they need in music, some in poetry. For some others, astronomy serves the same purpose. When we reflect upon the size and antiquity of the stellar universe, the controversies on this rather insignificant planet lose some of their importance, and the acerbity of our disputes seems a trifle ridiculous. And when we are liberated by this negative emotion we are able to realize more fully, through music or poetry, through history or science, through beauty or pain, that the really valuable things in human life are individual, not such things as happen on a battlefield or in the clash of politics or in the regimented march of masses of men towards an externally imposed goal. The organized life of the community is necessary, but it is necessary as mechanism, not something to be valued on its own account. What is of most value in human life is more analogous to what all the great religious teachers have spoken of. Those who believe in the Corporate State maintain that our highest activities are collective, whereas I should maintain that we all reach our best in different ways, and that the emotional unity of a crowd can only be achieved on a lower level.

The essential difference between the liberal outlook and that of the totalitarian State is that the former regards the welfare of the State as residing ultimately in the welfare of the individual, while the latter regards the State as the end and individuals merely as indispensable ingredients, whose welfare must be subordinated to a mystical totality which is a cloak for the interest of the rulers. Ancient Rome had something of the doctrine of State-worship, but Christianity fought the Emperors and ultimately won. Liberalism, in valuing the individual, is carrying on the Christian tradition; its opponents are reviving certain pre-Christian doctrines. From the first, the idolaters of the State have regarded education as the key to success. This appears, for example, in Fichte's *Addresses to the German Nation*, which deal at length with education. What Fichte desires is set forth in the following passage:—

If anyone were to say: 'How could anyone demand more of an education than that it should show the pupil the right and strongly recommend it to him; whether he follows these recommendations is his own affair, and if he does not do it, his own fault; he has free will, which no education can take from him': I should answer, in order to characterize more sharply the education I contemplate, that just in this recognition of and counting on the free will of the pupil lies the first error of education hitherto, and the distinct acknowledgment of its impotence and emptiness. For inasmuch as it admits that, after all its strongest operation, the will remains free,—that is, oscillating undecidedly between good and bad,—it admits that it neither can nor wishes to mould the will, or, since will is the essential root of man, man himself;

and that it holds this to be altogether impossible. The new education, on the contrary, would have to consist in a complete annihilation of the freedom of the will in the territory that it undertook to deal with.

His reason for desiring to create 'good' men is not that they are in themselves better than 'bad' men; his reason is that 'only in such [good men] can the German nation persist, but through bad men it will necessarily coalesce with foreign countries.'

All this may be taken as expressing the exact antithesis of what the liberal educator will wish to achieve. So far from 'annihilating the freedom of the will,' he will aim at strengthening individual judgment; he will instill what he can of the scientific attitude towards the pursuit of knowledge; he will try to make beliefs tentative and responsive to evidence; he will not pose before his pupils as omniscient, nor will he yield to the love of power on the pretense that he is pursuing some absolute good. Love of power is the chief danger of the educator, as of the politician; the man who can be trusted in education must care for his pupils on their own account, not merely as potential soldiers in an army or propagandists for a cause.

Fichte and the powerful men who have inherited his ideals, when they see children, think: 'Here is material that I can manipulate, that I can teach to behave like a machine in furtherance of my purposes; for the moment I may be impeded by joy of life, spontaneity, the impulse to play, the desire to live for purposes springing from within, not imposed from without; but all this, after the years of schooling that I shall impose, will be dead; fancy, imagination, art, and the power of thought will have been destroyed by obedience; the death of joy will have bred receptiveness to fanaticism; and in the end I shall find my human material as passive as stone from a quarry or coal from a mine. In the battles to which I shall lead them, some will die, some will live; those who die will die exultantly, as heroes, those who live will live on as my slaves, with that deep mental slavery to which my schools will have accustomed them.'

All this, to any person with natural affection for the young, is horrible; just as we teach children to avoid being destroyed by motorcars if they can, so we should teach them to avoid being destroyed by cruel fanatics, and to this end we should seek to produce independence of mind, somewhat skeptical and wholly scientific, and to preserve, as far as possible, the instinctive joy of life that is natural to healthy children. This is the task of a liberal education; to give a sense of the value of things other than domination, to help to create wise citizens of a free community, and, through the combination of citizenship with liberty in individual creativeness, to enable man to give to human life that splendor which some few have shown that it can achieve.

DEMOCRACY IN THE MAKING¹

Herbert Agar

DEMOCRACY cannot be understood if it is pictured solely as a political or economic system. Underlying all else, democracy must be a moral code, or it will not be effective. The concept of democracy has never been well defined; perhaps it eludes definition. . . .

There are three parts to the democratic ideal: the spiritual affirmation on which it rests, the economic order which it demands, and the political machinery which puts it into effect. I have stated the three parts in the order of their importance.² The third is the least important part of democracy, and it is the only part which exists fully in a place like New York City. It is a mere tool, capable of implementing democracy, if democracy should exist. But if democracy does not exist, the tool cannot bring it into being. The tool will merely be used for other purposes.

As a spiritual affirmation, democracy says that all men have certain minimum rights and requirements which must not be denied—the right to look after themselves and their families in decency without being forced into a slave relationship toward a master or toward the State, the right to a chance to do as well for themselves as their endowments permit, the right to the great basic freedoms which go with the name of civil liberties, the right to a recognition that in a true sense (perhaps best stated by the phrase, 'in the eyes of God') all men are equal.

These phrases have become smooth and soothing through much use. But if they be taken seriously, they are fighting words. They are almost as revolutionary as 'Christianity.' . . . We must decide whether to take the phrases seriously, or whether to abandon them once and for all. We can no longer afford to use them merely as magic spells to keep our consciences quiet. . . .

On the economic side democracy demands that society be so ordered that the spiritual affirmation has a chance to come true. It demands that men shall not be chattel slaves or wage slaves. It demands that there shall not be

¹Reprinted from *Pursuit of Happiness* by Herbert Agar (1938). Houghton Mifflin Company, publishers.

²But not necessarily in the order in which they come into being. In our country, for instance, the economic order came first—it was imposed on us by conditions of life in a new country, especially when we pushed west into the 'Valley of Democracy.' The economic conditions of life in that valley made it possible for the democratic ideal to become part of the American spirit.

Now that we have destroyed our economic democracy, we must reverse the order of events. We must start with the democratic ideal, if we still possess it, and insist upon rebuilding a democratic economic structure—not the identical one which we found when we went west, but one which is equally democratic.

such differences in economic opportunity, and in chances for self-betterment, that people at the bottom are denied hope.

This, too, is revolutionary; but it is a necessary deduction from the first point. It is dishonest to pretend to accept an ideal if we are unwilling to arrange the physical facts of life in such a way as to give the ideal a chance to come true. Over large areas of Jimmy Hines' New York, in much of our farming country, in many of our mine and textile towns, it is ironic to talk about a man's 'right' to look after himself and his family in decency. The time has come to give up pretending to believe in that right, or else to give up pretending that conditions in many parts of our country can be endured.

On the political side democracy demands such machinery of government as will enable the free man, the citizen who is neither spiritually nor economically enslaved, to express his will, to have his way when he is in a majority, to seek to persuade his fellow-citizens when he is in a minority. This political machinery exists in America. It is the only aspect of democracy which we have fully attained. By itself, however, the political machinery means little. If we forget the spiritual demand of democracy, if we let ourselves be persuaded that the economic demand is so difficult that it is impractical and may therefore be ignored, there is no use flattering ourselves that we are a democratic state, merely because we have met the third and easiest of the demands. Political democracy alone, without spiritual and economic democracy behind it, is a fraud. And because it is a fraud, it breeds corruption.

We give the vote, for example, to every adult in Jimmy Hines' district. But we do not give those people economic freedom, or even that minimum of economic safety which helps a man be true to his better nature. And we do not give them the feeling that we really believe all men have a right to self-respect and freedom, or that all men in the eyes of heaven are equal. So what do they do with their vote? They sell it to Jimmy Hines for 'a pair of shoes, a scuttle of coal, a parole, a job, or a bottle of milk.' But suppose our citizens could have these commodities without graft? Suppose America, the richest country in the world, had as little grinding poverty as Sweden, as much equality of opportunity as Denmark? Jimmy Hines would go out of business.

Another field in which we can see the machinery of political democracy breaking down under the absence of real democracy is the field of policy-making. If our democracy were vital, the major policies of government would be formed by a process of public argument. 'Such an argument,' as the National Policy Committee has pointed out, 'is the very essence of the democratic process. In a country where democratic procedure prevails, the

Executive does what he finds to be politically possible after an open argument has run its course, instead of merely doing what his experts tell him is best for the country. It does not make much difference who starts the argument. The Executive may start it, or the Legislature, or some group of private citizens. The important thing is that, prior to the enactment of legislation, or the initiation of administrative action, an argument should be started and carried on—citizens arguing with each other and with the government until the issue is defined and the alternatives are understood.'

In the absence of such creative argument, the Executive is forced to formulate policy, on expert advice, and to push the appropriate laws through the Legislature by means of party discipline. But these policies may be inadequate, or actively unpopular to that large part of the public which has had no hand in their formulation. The Executive may then be driven to popularize his policies by the use of propaganda. Or some demagogue like Father Coughlin or Huey Long may take advantage of the public's bewilderment, may use the modern machinery of propaganda to foist off ready-made answers upon a public which has not faced the questions, has not argued them at home, has not heard them debated in public.

In these ways the democratic machinery is step by step perverted into the machinery for a dictatorship. The essence of modern dictatorships is that the leader first initiates policy and the people are then propagandized into voting 'Yes' by over-whelming majorities. The essence of democracy is that the people first discuss and argue over policy, lengthily and inefficiently, and the Executive then 'does what he finds to be politically possible after an open argument has run its course.'

An important point to notice, and a hopeful point, is that the size of America does not defeat this process of open argument. For purposes of argument and public debate, America is smaller today than she was in the days of Jefferson and Jackson. Public policy-making is not defeated by geography or by Fate. It is defeated by our neglect of the two prime aspects of democracy—the spiritual ideal and the economic order. President Roosevelt says that a third of our people are 'ill-clothed, ill-housed, and ill-fed.' The statement is probably optimistic. And every report, public and private, on our system of popular education reveals a deplorable mediocrity. Can we expect these people to play a vital part in democratic policy-making? Can we expect such a response from people who know we do not mean what we are saying when we talk of equality, and who know furthermore that we are not doing our best to provide a larger chance of equality for their children?

Modern means of communication can help support a true democracy, or

they can help turn a fraudulent democracy into a tyrant State. But no machinery can do either of these things by itself. The result depends on the moral purpose of the citizens.

We shall never reform our society merely through trying, from time to time, to tinker with the political machine—passing direct primary laws, or laws to secure an ‘honest count,’ etc. The result of ‘reform’ has always been disappointing—and for a good reason. For even if the political machinery should at last be made perfect, there would still be no true democracy in America until we had faced the other two demands. . . . And no political reform can save us until we accept the moral and economic obligations of our ideal. . . .

I have not raised the question, ‘What has gone wrong?’ in order to impose my own answer. I have raised it because I hope, by tracing the history of the Democracy, to make the question come alive, so that more and more Americans will insist on facing it, insist on finding the answer that seems to them true.

One man’s answer to this question is more than likely to be wrong. But the question itself is not wrong. The question is a great fact. Life has flung the question at us. If we face it wisely and explore its meaning, we are probably good enough to find, through argument and experiment, a working answer. But if we deny the question, turning a foolish face of optimism on the problems which assail us, we shall not deserve success and neither shall we attain it.

One moral, I think, can be drawn. . . . The Episcopal prayer book has a phrase about ‘God, in whose service is perfect freedom.’ And John Milton wrote, ‘None can love freedom heartily but good men.’ If America is to become a free nation, she must find her freedom in the service of a high ideal. Freedom for its own sake, mere absence of restraint, is bound to mean freedom for the powerful to oppress the poor. It is bound to mean anarchy like that of the robber-baron period, when the foundations were laid for our present national plight.

If democracy is taken with full seriousness, it means immense sacrifice; immense self-discipline on the part of society. It means a noble moral and economic code; it means no compromise with the forces that make for plutocracy. A society seeing democracy in these terms, and truly desiring it, truly submitting to the restraints imposed by the quest for it, might attain the freedom which the theologian finds in the service of God. But if democracy is pictured solely in terms of votes for everybody and the least possible restraint on enterprise, then democracy becomes the disorderly self-indulgence which the dictators say it is.

GOVERNMENT

If democracy means the slack assertion that every man is as good as every other (which in worldly terms is obviously a lie), if it means that the prejudices of an ignorant or a misled majority are to be accepted as the last word, then democracy has become the degradation of a noble ideal. As such, it cannot be defended. It is open to all the popular attacks which are leveled against it today.

'All men are created equal' can be interpreted in this shoddy way. It can be made into an excuse for spiritual sloth and for tolerating the second-rate. It can also be made into a demand for nobility and devotion.

Let us imagine an America trying with self-sacrifice to live in steady consciousness of the affirmation that in some high sense men are equal. Our life would not then exhibit that vulgarization of democracy which the dictators deride. On the part of the privileged members of our world there would be a sense of *noblesse oblige*, a driving desire to create in more and more detail the physical circumstances which would make it possible for more and more men to experience equality. We should not be saying that 'everybody ought to be equally rich'; but each year fewer of us would care whether we were rich or not. We should not be saying that 'one man's notion is intrinsically as good as another's'; but each year more of us would be in a position to make a wise contribution to our common life. Even so, we should never build a democracy. We should never reach our goal, with nothing further to do but stay there. Yet so long as we remained keyed to this effort we should be attempting something noble. And in the process we should make America a great nation.

Too often today the great phrases of our democratic tradition have become little more than an excuse for life's injustice. And the excuse is wearing thin. It will not last out our lifetimes. Unless we can revive democracy as a fighting, exigent demand, it will give way to some other affirmation, however inferior, which at least has the courage to insist that men make sacrifices to serve it.

'The democratic phase,' writes Walter Lippmann, 'which began in the eighteenth century, has about run its course. Its assumptions no longer explain the facts of the modern world and its ideals are no longer congenial to modern man.' I believe that Mr. Lippmann is wrong. The world is tired of lip-service to democracy. The world has learned that fake democracy is worse than honest despotism. But I am not convinced that when we turn against fake democracy we shall demand dictatorship. Possibly we shall demand that democracy be tried in earnest.

It is also possible, of course, that when we see democracy clearly we may not choose to serve so stringent an ideal. If this is true, let us admit it openly.

Let us either serve the ideal honestly, or deny it honestly and look for another. If we dodge the choice, if we pretend to serve the ideal while really betraying it, we are on the road to calamity. . . .

I have seen a real democracy in the making. I have seen a community that believes in the democratic life as strongly as the western counties of Virginia believed in it when they elected Jefferson President. Having seen this it is not possible to be content with fake democracy or with none at all.

The citizens of northeastern Nova Scotia—fishermen and farmers, miners and storekeepers, priests, teachers, and business men—have for twenty years been building a democratic society through adult education and cooperative enterprise. They have contrived no paradise; but they have lifted themselves out of poverty, ignorance, despair. And while improving their worldly state they have learned the excitement and the sense of goodness that comes to people who work with their fellows disinterestedly for the common well-being. This rare excitement is shared by most of the community; it is not the privilege of a few superior people.

The movement, which started in one corner of Nova Scotia, has reached a point where it is an inspiration over the whole of the Maritime Provinces and out to the island of Newfoundland. If it continues to prosper it will not be long before all those Provinces see a demonstration of what can be meant, in this world, by the brotherhood of man.

The movement may fail; but so far it has gone steadily ahead. If any American has forgotten what democracy feels like, he can learn his own heritage by visiting northeastern Nova Scotia. He will discover good men making a new world—unfrightened men who do not hate the enemy in a personal sense. It is not a class war these men are making. It is a war against institutions and against the sort of physical conditions that deprive men of hope. It is also a war of reason and liberation against the anti-social elements in man. And it is not a fanatical war; it is a war in which the soldiers dare to have fun.

I do not think any social and political ideal except democracy could produce this result among men. Democracy, as practiced by those Nova Scotians, could be the answer to the strife and hatreds which appear to be destroying Western civilization. Statesmen and philosophers have for generations been looking for the 'moral equivalent to war.' Democracy, if taken with high seriousness, could be the answer to that long search.

Anyone who has seen the ease with which all people can be roused to fight must know that war gratifies some important part of human nature. Much as we hate war there is a part of each one of us which loves it also. It is that part which betrays us to the propagandists when the war-drums

are beaten. And the most attractive feature of war is that it gives men a superb chance to work together, side by side in the same ditch and with the same fate before them. In a lonely and divided world, war breeds a comradeship which most men want and which all men need. Democracy can breed that same comradeship—but only if we serve it honestly and with our hearts. For example, if we really should seek to practice the phrases of the Declaration of Independence we could build a good America without the use of guns or tear-gas or Siberias. We could even enjoy ourselves while we did it.

The 'if' may seem fantastic to many readers. I can only repeat that I have seen the thing happening. I do not think that Nova Scotia is the only corner of our continent where men can rise to moral passion.

War and Peace

THE ARMY IN BROBDINGNAG • JONATHAN SWIFT

IN THE LAND OF THE HOUYHNNHMS • JONATHAN SWIFT

THE CRISIS • THOMAS PAINE

THE MORAL EQUIVALENT OF WAR • WILLIAM JAMES

AN ATOMIC ARMS RACE AND ITS ALTERNATIVES • IRVING LANGMUIR

WHY MEN FIGHT • WILL DURANT

VICTORY WITHOUT PEACE • ARCHIBALD MACLEISH

THE ARMY IN BROBDINGNAG¹

Jonathan Swift

IN HOPES to ingratiate myself farther into his Majesty's favour, I told him of an invention discovered between three and four hundred years ago, to make a certain powder, into an heap of which the smallest spark of fire falling, would kindle the whole in a moment, although it were as big as a mountain, and make it all fly up in the air together, with a noise and agitation greater than thunder. That a proper quantity of this powder rammed into an hollow tube of brass or iron, according to its bigness, would drive a ball of iron or lead with such violence and speed, as nothing was able to sustain its force. That the largest balls thus discharged, would not only destroy whole ranks of an army at once, but batter the strongest walls to the ground, sink down ships, with a thousand men in each, to the bottom of the sea; and, when linked together by a chain, would cut through masts and rigging, divide hundreds of bodies in the middle, and lay all waste before them. That we often put this powder into large hollow balls of iron, and discharged them by an engine into some city we were besieging, which would rip up the pavements, tear the houses to pieces, burst and throw splinters on every side, dashing out the brains of all who came near. That I knew the ingredients very well, which were cheap, and common; I understood the manner of compounding them, and could direct his workmen how to make those tubes of a size proportionable to all other things in his Majesty's kingdom, and the largest need not be above an hundred foot long; twenty or thirty of which tubes, charged with the proper quantity of powder and balls, would batter down the walls of the strongest town in his dominions in a few hours, or destroy the whole metropolis, if ever it should pretend to dispute his absolute commands. This I humbly offered to his Majesty, as a small tribute of acknowledgment in return of so many marks that I had received of his royal favour and protection.

The King was struck with horror at the description I had given of those terrible engines, and the proposal I had made. He was amazed how so impotent and grovelling an insect as I (these were his expressions) could entertain such inhuman ideas, and in so familiar a manner as to appear wholly unmoved at all by the scenes of blood and desolation, which I had painted as the common effects of those destructive machines, whereof he said some evil genius, enemy to mankind, must have been the first contriver. As for himself, he protested that although few things delighted him so much as new discoveries in art or in nature, yet he would rather lose half his kingdom than be

¹From "A Voyage to Brobdingnag" in *Gulliver's Travels* by Jonathan Swift (1726).

privity to such a secret, which he commanded me, as I valued my life, never to mention any more.

A strange effect of narrow principles and short views! that a prince possessed of every quality which procures veneration, love, and esteem; of strong parts, great wisdom, and profound learning, endued with admirable talents for government, and almost adored by his subjects, should from a nice unnecessary scruple, whereof in Europe we can have no conception, let slip an opportunity put into his hands, that would have made him absolute master of the lives, the liberties, and the fortunes of his people. Neither do I say this with the least intention to detract from the many virtues of that excellent King, whose character I am sensible will on this account be very much lessened in the opinion of an English reader: but I take this defect among them to have risen from their ignorance, they not having hitherto reduced politics into a science, as the more acute wits of Europe have done. For I remember very well, in a discourse one day with the King, when I happened to say there were several thousand books among us written upon the art of government, it gave him (directly contrary to my intention) a very mean opinion of our understandings. He professed both to abominate and despise all mystery, refinement, and intrigue, either in a prince or a minister. He could not tell what I meant by secrets of state, where an enemy or some rival nation were not in the case. He confined the knowledge of governing within very narrow bounds; to common sense and reason, to justice and lenity, to the speedy determination of civil and criminal causes; with some other obvious topics, which are not worth considering. And he gave it for his opinion, that whoever could make two ears of corn or two blades of grass grow upon a spot of ground where only one grew before, would deserve better of mankind, and do more essential service to his country than the whole race of politicians put together.

As to their military affairs, they boast that the King's army consists of an hundred and seventy-six thousand foot and thirty-two thousand horse: if that may be called an army which is made up of tradesmen in the several cities, and farmers in the country, whose commanders are only the nobility and gentry, without pay or reward. They are indeed perfect enough in their exercises, and under very good discipline, wherein I saw no great merit; for how should it be otherwise, where every farmer is under the command of his own landlord, and every citizen under that of the principal men in his own city, chosen after the manner of Venice by ballot?

I have often seen the militia of Lorbrulgrud² drawn out to exercise in a great field near the city of twenty miles square. They were in all not above

²Name of the metropolis in Brobdingnag, meaning Pride of the Universe.

twenty-five thousand foot, and six thousand horse; but it was impossible for me to compute their number, considering the space of ground they took up. A cavalier mounted on a large steed, might be about an hundred foot high. I have seen this whole body of horse, upon a word of command, draw their swords at once, and brandish them in the air. Imagination can figure nothing so grand, so surprising, and so astonishing. It looked as if ten thousand flashes of lightning were darting at the same time from every quarter of the sky.

I was curious to know how this prince, to whose dominions there is no access from any other country, came to think of armies, or to teach his people the practice of military discipline. But I was soon informed, both by conversation and reading their histories. For in the course of many ages they have been troubled with the same disease to which the whole race of mankind is subject; the nobility often contending for power, the people for liberty, and the King for absolute dominion. All which, however happily tempered by the laws of the kingdom, have been sometimes violated by each of the three parties, and have once or more occasioned civil wars, the last whereof was happily put an end to by this prince's grandfather by a general composition;³ and the militia, then settled with common consent, hath been ever since kept in the strictest duty.

IN THE LAND OF THE HOUYHNNHMS¹

Jonathan Swift

THE reader may please to observe, that the following extract of many conversations I had with my master, contains a summary of the most material points which were discoursed at several times for above two years; his Honour often desiring fuller satisfaction as I farther improved in the Houyhnhnm tongue. I laid before him, as well as I could, the whole state of Europe; I discoursed of trade and manufactures, of arts and sciences; and the answers I gave to all the questions he made, as they arose upon several subjects, were a fund of conversation not to be exhausted. But I shall here only set down the substance of what passed between us concerning my own country, reducing it into order as well as I can, without any regard to time or other circumstances, while I strictly adhere to truth. My only concern is that I shall hardly be able to do justice to my master's arguments and expressions, which must

³General agreement.

¹From "A Voyage to the Houyhnhnms" in *Gulliver's Travels* by Jonathan Swift (1726).

needs suffer by my want of capacity, as well as by a translation into our barbarous English.

In obedience therefore to his Honour's commands, I related to him the Revolution under the Prince of Orange; the long war with France entered into by the said prince, and renewed by his successor the present Queen, wherein the greatest powers of Christendom were engaged, and which still continued: I computed at his request that about a million of Yahoos² might have been killed in the whole progress of it, and perhaps a hundred or more cities taken, and thrice as many ships burnt or sunk.

He asked me what were the usual causes or motives that made one country go to war with another. I answered they were innumerable, but I should only mention a few of the chief. Sometimes the ambition of princes, who never think they have land or people enough to govern; sometimes the corruption of ministers, who engage their master in a war in order to stifle or divert the clamour of the subjects against their evil administration. Difference in opinions hath cost many millions of lives: for instance, whether flesh be bread, or bread be flesh; whether the juice of a certain berry be blood or wine; whether whistling be a vice or a virtue; whether it be better to kiss a post, or throw it into the fire; what is the best colour for a coat, whether black, white, red, or gray; and whether it should be long or short, narrow or wide, dirty or clean; with many more. Neither are any wars so furious and bloody, or of so long continuance, as those occasioned by difference in opinion, especially if it be in things indifferent.

Sometimes the quarrel between two princes is to decide which of them shall dispossess a third of his dominions, where neither of them pretend to any right. Sometimes one prince quarrelleth with another, for fear the other should quarrel with him. Sometimes a war is entered upon, because the enemy is too strong, and sometimes because he is too weak. Sometimes our neighbours want the things which we have, or have the things which we want; and we both fight, till they take ours or give us theirs. It is a very justifiable cause of a war to invade a country after the people have been wasted by famine, destroyed by pestilence, or embroiled by factions among themselves. It is justifiable to enter into war against our nearest ally, when one of his towns lies convenient for us, or a territory of land, that would render our dominions round and complete. If a prince sends forces into a nation where the people are poor and ignorant, he may lawfully put half of them to death, and make slaves of the rest, in order to civilize and reduce them from their barbarous way of living. It is a very kingly, honourable, and frequent prac-

²Term used by Swift for the human brutes who were subject to the horses in the land of the Houyhnhnms.

tice, when one prince desires the assistance of another to secure him against an invasion, that the assistant, when he hath driven out the invader, should seize on the dominions himself, and kill, imprison or banish the prince he came to relieve. Alliance by blood or marriage is a frequent cause of war between princes; and the nearer the kindred is, the greater is their disposition to quarrel: poor nations are hungry, and rich nations are proud; and pride and hunger will ever be at variance. For these reasons, the trade of a soldier is held the most honourable of all others; because a soldier is a Yahoo hired to kill in cold blood as many of his own species, who have never offended him, as possibly he can.

There is likewise a kind of beggarly princes in Europe, not able to make war by themselves, who hire out their troops to richer nations, for so much a day to each man; of which they keep three fourths to themselves, and it is the best part of their maintenance; such are those in Germany and other northern parts of Europe.

What you have told me, (said my master) upon the subject of war, does indeed discover most admirably the effects of that reason you pretend to; however, it is happy that the shame is greater than the danger; and that nature hath left you utterly incapable of doing much mischief.

For your mouths lying flat with your faces, you can hardly bite each other to any purpose, unless by consent. Then as to the claws upon your feet before and behind, they are so short and tender, that one of our Yahoos would drive a dozen of yours before him. And therefore in recounting the numbers of those who have been killed in battle, I cannot but think that you have *said the thing which is not*.

I could not forbear shaking my head and smiling a little at his ignorance. And being no stranger to the art of war, I gave him a description of cannons, culverins, muskets, carabines, pistols, bullets, powder, swords, bayonets, battles, sieges, retreats, attacks, undermines, countermines, bombardments, sea fights; ships sunk with a thousand men, twenty thousand killed on each side; dying groans, limbs flying in the air, smoke, noise, confusion, trampling to death under horses' feet; flight, pursuit, victory; fields strewn with carcasses left for food to dogs, and wolves, and birds of prey; plundering, stripping, ravishing, burning, and destroying. And to set forth the valour of my own dear countrymen, I assured him that I had seen them blow up a hundred enemies at once in a siege, and as many in a ship, and beheld the dead bodies come down in pieces from the clouds, to the great diversion of the spectators.

I was going on to more particulars, when my master commanded me silence. He said whoever understood the nature of Yahoos might easily believe it possible for so vile an animal to be capable of every action I had named,

if their strength and cunning equalled their malice. But as my discourse had increased his abhorrence of the whole species, so he found it gave him a disturbance in his mind, to which he was wholly a stranger before. He thought his ears being used to such abominable words, might by degrees admit them with less detestation. That although he hated the Yahoos of this country, yet he no more blamed them for their odious qualities, than he did a *gnnayh* (a bird of prey) for its cruelty, or a sharp stone for cutting his hoof. But when a creature pretending to reason could be capable of such enormities, he dreaded lest the corruption of that faculty might be worse than brutality itself. He seemed therefore confident, that instead of reason, we were only possessed of some quality fitted to increase our natural vices; as the reflection from a troubled stream returns the image of an ill-shapen body, not only larger, but more distorted.

He added, that he had heard too much upon the subject of war, both in this and some former discourses. . . .

THE CRISIS¹

Thomas Paine

“THE times that tried men’s souls,” are over—and the greatest and completest revolution the world ever knew, is gloriously and happily accomplished.

But to pass from the extremes of danger to safety—from the tumult of war to the tranquillity of peace, though sweet in contemplation, requires a gradual composure of the senses to receive it. Even calmness has the power of stunning, when it opens too instantly upon us. The long and raging hurricane that should cease in a moment, would leave us in a state rather of wonder than enjoyment; and some moments of recollection must pass, before we could be capable of tasting the felicity of repose.

There are but few instances, in which the mind is fitted for sudden transitions: it takes in its pleasures by reflection and comparison, and those must have time to act before the relish for new scenes is complete.

In the present case—the mighty magnitude of the object—the various uncertainties of fate it has undergone—the numerous and complicated dangers we have suffered or escaped—the eminence we now stand on, and the vast prospect before us, must all conspire to impress us with contemplation.

¹From *The Crisis Papers*, No. 15, April 19, 1783.

To see it in our power to make a world happy—to teach mankind the art of being so—to exhibit, on the theater of the universe, a character hitherto unknown—and to have, as it were, a new creation intrusted to our hands, are honors that command reflection, and can neither be too highly estimated, nor too gratefully received.

In this pause, then, of recollection—while the storm is ceasing, and the long agitated mind is vibrating to a rest, let us look back on the scenes we have passed, and learn from experience what is yet to be done.

Never, I say, had a country so many openings to happiness as this. Her setting out in life, like the rising of a fair morning, was unclouded and promising. Her cause was good. Her principles just and liberal. Her temper serene and firm. Her conduct regulated by the nicest steps, and everything about her wore the mark of honor.

It is not every country (perhaps there is not another in the world) that can boast so fair an origin. Even the first settlement of America corresponds with the character of the Revolution. Rome, once the proud mistress of the universe, was originally a band of ruffians. Plunder and rapine made her rich, and her oppression of millions made her great. But America need never be ashamed to tell her birth, nor relate the stages by which she rose to empire.

The remembrance, then, of what is past, if it operates rightly, must inspire her with the most laudable of all ambition, that of adding to the fair fame she began with. The world has seen her great in adversity; struggling, without a thought of yielding, beneath accumulated difficulties; bravely, nay proudly, encountering distress, and rising in resolution as the storm increased. All this is justly due to her, for her fortitude has merited the character. Let, then, the world see that she can bear prosperity; and that her honest virtue in time of peace, is equal to the bravest virtue in time of war.

She is now descending to the scenes of quiet and domestic life. Not beneath the cypress shade of disappointment, but to enjoy in her own land, and under her own vine, the sweet of her labors, and the reward of her toil. In this situation, may she never forget that a fair national reputation is of as much importance as independence; that it possesses a charm that wins upon the world, and makes even enemies civil; that it gives a dignity which is often superior to power, and commands reverence where pomp and splendor fail.

It would be a circumstance ever to be lamented and never to be forgotten, were a single blot, from any cause whatever, suffered to fall on a revolution, which to the end of time must be an honor to the age that accomplished it: and which has contributed more to enlighten the world, and diffuse a spirit of freedom and liberality among mankind, than any human event (if this may be called one) that ever preceded it.

It is not among the least of the calamities of a long continued war, that it unhinges the mind from those nice sensations which at other times appear so amiable. The continual spectacle of woe blunts the finer feelings, and the necessity of bearing with the sight, renders it familiar. In like manner, are many of the moral obligations of society weakened, till the custom of acting by necessity becomes an apology, where it is truly a crime. Yet let but a nation conceive rightly of its character, and it will be chastely just in protecting it.

None ever began with a fairer than America, and none can be under a greater obligation to preserve it.

The debt which America has contracted, compared with the cause she has gained, and the advantages to flow from it, ought scarcely to be mentioned. She has it in her choice to do, and to live as happily as she pleases. The world is in her hands. She has no foreign power to monopolize her commerce, perplex her legislation, or control her prosperity. The struggle is over, which must one day have happened, and, perhaps, never could have happened at a better time. And instead of a domineering master, she has gained an *ally*, whose exemplary greatness, and universal liberality, have extorted a confession even from her enemies.

With the blessings of peace, independence, and an universal commerce, the states, individually and collectively, will have leisure and opportunity to regulate and establish their domestic concerns, and to put it beyond the power of calumny to throw the least reflection on their honor. Character is much easier kept than recovered, and that man, if any such there be, who, from sinister views, or littleness of soul, lends unseen his hand to injure it, contrives a wound it will never be in his power to heal.

As we have established an inheritance for posterity, let that inheritance descend, with every mark of an honorable conveyance. The little it will cost, compared with the worth of the states, the greatness of the object, and the value of national character, will be a profitable exchange.

But that which must more forcibly strike a thoughtful, penetrating mind, and which includes and renders easy all inferior concerns, is the *Union of the States*. On this our great national character depends. It is this which must give us importance abroad and security at home. It is through this only, that we are, or can be nationally known in the world; it is the flag of the United States which renders our ships and commerce safe on the seas, or in a foreign port. Our Mediterranean passes must be obtained under the same style. All our treaties, whether of alliance, peace or commerce, are formed under the sovereignty of the United States, and Europe knows us by no other name or title.

The division of the empire into states is for our own convenience, but abroad this distinction ceases. The affairs of each state are local. They can go no further than to itself. And were the whole worth of even the richest of them expended in revenue, it would not be sufficient to support sovereignty against a foreign attack. In short, we have no other national sovereignty than as United States.

It would even be fatal for us if we had—too expensive to be maintained, and impossible to be supported. Individuals, or individual states, may call themselves what they please; but the world, and especially the world of enemies, is not to be held in awe by the whistling of a name. Sovereignty must have power to protect all parts that compose and constitute it: and as UNITED STATES we are equal to the importance of the title, but otherwise we are not.

Our union, well and wisely regulated and cemented, is the cheapest way of being great—the easiest way of being powerful, and the happiest invention in government which the circumstances of America can admit of, because it collects from each state that which, by being inadequate, can be of no use to it, and forms an aggregate that serves for all.

The states of Holland are an unfortunate instance of the effects of individual sovereignty. Their disjointed condition exposes them to numerous intrigues, losses, calamities and enemies; and the almost impossibility of bringing their measures to a decision, and the decision into execution, is to them, and would be to us, a source of endless misfortune.

It is with confederated states as with individuals in society; something must be yielded up to make the whole secure. In this view of things we gain by what we give, and draw an annual interest greater than the capital.

I ever feel myself hurt when I hear the Union, the great palladium of our liberty and safety, the least irreverently spoken of. It is the most sacred thing in the Constitution of America, and that which every man should be most proud and tender of.

Our citizenship in the United States is our national character. Our citizenship in any particular state is only our local distinction. By the latter we are known at home; by the former, to the world. Our great title is AMERICANS—our inferior one varies with the place.

So far as my endeavors could go, they have all been directed to conciliate the affections, unite the interests, and draw and keep the mind of the country together; and the better to assist in this foundation work of the Revolution, I have avoided all places of profit or office, either in the state I live in, or in the United States; kept myself at a distance from all parties and party connections, and even disregarded all private and inferior concerns: and when

we take into view the great work which we have gone through, and feel, as we ought to feel, the just importance of it, we shall then see, that the little wranglings and indecent contentions of personal parley, are as dishonorable to our characters, as they are injurious to our repose.

It was the cause of America that made me an author. The force with which it struck my mind, and the dangerous condition the country appeared to me in, courting an impossible and an unnatural reconciliation with those who were determined to reduce her, instead of striking out into the only line that could cement and save her—a DECLARATION OF INDEPENDENCE—made it impossible for me, feeling as I did, to be silent: and if, in the course of more than seven years, I have rendered her any service, I have likewise added something to the reputation of literature by freely and disinterestedly employing it in the great cause of mankind, and showing that there may be genius without prostitution.

Independence always appeared to me practicable and probable; provided the sentiment of the country could be formed and held to the object: and there is no instance in the world, where a people so extended, and wedded to former habits of thinking, and under such a variety of circumstances, were so instantly and effectually pervaded, by a turn in politics, as in the case of independence, and who supported their opinion, undiminished, through such a succession of good and ill fortune, till they crowned it with success.

But as the scenes of war are closed, and every man preparing for home and happier times, I therefore take my leave of the subject. I have most sincerely followed it from beginning to end, and through all its turns and windings: and whatever country I may hereafter be in, I shall always feel an honest pride at the part I have taken and acted, and a gratitude to Nature and Providence for putting it in my power to be of some use to mankind.

THE MORAL EQUIVALENT OF WAR¹

William James

THE war against war is going to be no holiday excursion or camping party. The military feelings are too deeply grounded to abdicate their place among our ideals until better substitutes are offered than the glory and shame that come to nations as well as to individuals from the ups and

¹From *Memories and Studies*, by William James (1911), reprinted by permission of Longmans, Green & Co.

downs of politics and the vicissitudes of trade. There is something highly paradoxical in the modern man's relation to war. Ask all our millions, north and south, whether they would vote now (were such a thing possible) to have our war for the Union expunged from history, and the record of a peaceful transition to the present time substituted for that of its marches and battles, and probably hardly a handful of eccentrics would say yes. Those ancestors, those efforts, those memories and legends, are the most ideal part of what we now own together, a sacred spiritual possession worth more than all the blood poured out. Yet ask those same people whether they would be willing in cold blood to start another civil war now to gain another similar possession, and not one man or woman would vote for the proposition. In modern eyes, precious though wars may be, they must not be waged solely for the sake of the ideal harvest. Only when forced upon one, only when an enemy's injustice leaves us no alternative, is a war now thought permissible.

It was not thus in ancient times. The earlier men were hunting men, and to hunt a neighboring tribe, kill the males, loot the village and possess the females, was the most profitable, as well as the most exciting, way of living. Thus were the more martial tribes selected, and in chiefs and peoples a pure pugnacity and love of glory came to mingle with the more fundamental appetite for plunder.

Modern war is so expensive that we feel trade to be a better avenue to plunder; but modern man inherits all the innate pugnacity and all the love of glory of his ancestors. Showing war's irrationality and horror is of no effect upon him. The horrors make the fascination. War is the *strong* life; it is life *in extremis*; war taxes are the only ones men never hesitate to pay, as the budgets of all nations show us.

History is a bath of blood. The *Iliad* is one long recital of how Diomedes and Ajax, Sarpedon and Hector, *killed*. No detail of the wounds they made is spared us, and the Greek mind fed upon the story. Greek history is a panorama of jingoism and imperialism—war for war's sake, all the citizens being warriors. It is horrible reading, because of the irrationality of it all—save for the purpose of making "history"—and the history is that of the utter ruin of a civilization in intellectual respects perhaps the highest the earth has ever seen.

Those wars were purely piratical. Pride, gold, women, slaves, excitement, were their only motives. In the Peloponnesian War, for example, the Athenians asked the inhabitants of Melos (the island where the "Venus of Milo" was found), hitherto neutral, to own their lordship. The envoys meet, and hold a debate which Thucydides gives in full, and which, for sweet reason-

ableness of form, would have satisfied Matthew Arnold. "The powerful exact what they can," said the Athenians, "and the weak grant what they must." When the Meleans say that sooner than be slaves they will appeal to the gods, the Athenians reply: "Of the gods we believe and of men we know that, by a law of their nature, wherever they can rule they will. This law was not made by us, and we are not the first to have acted upon it; we did but inherit it, and we know that you and all mankind, if you were as strong as we are, would do as we do. So much for the gods; we have told you why we expect to stand as high in their good opinion as you." Well, the Meleans still refused, and their town was taken. "The Athenians," Thucydides quietly says, "thereupon put to death all who were of military age and made slaves of the women and children. They then colonized the island, sending thither five hundred settlers of their own."

Alexander's career was piracy pure and simple, nothing but an orgy of power and plunder, made romantic by the character of the hero. There was no rational principle in it, and the moment he died his generals and governors attacked one another. The cruelty of those times is incredible. When Rome finally conquered Greece, Paulus Aemilius was told by the Roman Senate to reward his soldiers for their toil by "giving" them the old kingdom of Epirus. They sacked seventy cities and carried off a hundred and fifty thousand inhabitants as slaves. How many they killed I know not; but in Etolia they killed all the senators, five hundred and fifty in number. Brutus was "the noblest Roman of them all," but to reanimate his soldiers on the eve of Philippi he similarly promises to give them the cities of Sparta and Thessalonica to ravage, if they win the fight.

Such was the gory nurse that trained societies to cohesiveness. We inherit the warlike type; and for most of the capacities of heroism that the human race is full of we have to thank this cruel history. Dead men tell no tales, and if there were any tribes of other types than this they have left no survivors. Our ancestors have bred pugnacity into our bone and marrow, and thousands of years of peace won't breed it out of us. The popular imagination fairly fattens on the thought of wars. Let public opinion once reach a certain fighting pitch, and no ruler can withstand it. In the Boer War both governments began with bluff, but couldn't stay there; the military tension was too much for them. In 1898 our people had read the word WAR in letters three inches high for three months in every newspaper. The pliant politician McKinley was swept away by their eagerness, and our squalid war with Spain became a necessity.

At the present day, civilized opinion is a curious mental mixture. The military instincts and ideals are as strong as ever, but are confronted by

reflective criticisms which sorely curb their ancient freedom. Innumerable writers are showing up the bestial side of military service. Pure loot and mastery seem no longer morally avowable motives, and pretexts must be found for attributing them solely to the enemy. England and we, our army and navy authorities repeat without ceasing, arm solely for "peace"; Germany and Japan it is who are bent on loot and glory. "Peace" in military mouths today is a synonym for "war expected." The word has become a pure provocative, and no government wishing peace sincerely should allow it ever to be printed in a newspaper. Every up-to-date dictionary should say that "peace" and "war" mean the same thing, now *in posse*, now *in actu*. It may even reasonably be said that the intensely sharp competitive *preparation* for war by the nations *is the real war*, permanent, unceasing; and that the battles are only a sort of public verification of the mastery gained during the "peace" interval.

It is plain that on this subject civilized man has developed a sort of double personality. If we take European nations, no legitimate interest of any one of them would seem to justify the tremendous destructions which a war to compass it would necessarily entail. It would seem as though common sense and reason ought to find a way to reach agreement in every conflict of honest interests. I myself think it our bounden duty to believe in such international rationality as possible. But, as things stand, I see how desperately hard it is to bring the peace party and the war party together, and I believe that the difficulty is due to certain deficiencies in the program of pacificism which set the militarist imagination strongly, and to a certain extent justifiably, against it. In the whole discussion both sides are on imaginative and sentimental ground. It is but one utopia against another, and everything one says must be abstract and hypothetical. Subject to this criticism and caution, I will try to characterize in abstract strokes the opposite imaginative forces, and point out what to my own very fallible mind seems the best utopian hypothesis, the most promising line of conciliation.

In my remarks, pacifist though I am, I will refuse to speak of the bestial side of the war regime (already done justice to by many writers) and consider only the higher aspects of militaristic sentiment. Patriotism no one thinks discreditable; nor does anyone deny that war is the romance of history. But inordinate ambitions are the soul of every patriotism, and the possibility of violent death the soul of all romance. The militarily patriotic and romantic-minded everywhere, and especially the professional military class, refuse to admit for a moment that war may be a transitory phenomenon in social evolution. The notion of a sheep's paradise like that revolts, they say, our higher imagination. Where then would be the steeps of life? If war had ever

stopped, we should have to reinvent it, on this view, to redeem life from flat degeneration.

Reflective apologists for war at the present day all take it religiously. It is a sort of sacrament. Its profits are to the vanquished as well as to the victor; and quite apart from any question of profit, it is an absolute good, we are told, for it is human nature at its highest dynamic. Its "horrors" are a cheap price to pay for rescue from the only alternative supposed, of a world of clerks and teachers, of coeducation and zoophily, of "consumer's leagues" and "associated charities," of industrialism unlimited and feminism unabashed. No scorn, no hardness, no valor any more! Fie upon such a cattle-yard of a planet!

So far as the central essence of this feeling goes, no healthy-minded person, it seems to me, can help to some degree partaking of it. Militarism is the great preserver of our ideals of hardihood, and human life with no use for hardihood would be contemptible. Without risks or prizes for the darer, history would be insipid indeed; and there is a type of military character which everyone feels that the race should never cease to breed, for everyone is sensitive to its superiority. The duty is incumbent on mankind, of keeping military characters in stock—of keeping them, if not for use, then as ends in themselves and as pure pieces of perfection—so that Roosevelt's weaklings and mollicoddles may not end by making everything else disappear from the face of nature.

This natural sort of feeling forms, I think, the innermost soul of army writings. Without any exception known to me, militarist authors take a highly mystical view of their subject, and regard war as a biological or sociological necessity, uncontrolled by ordinary psychological checks and motives. When the time of development is ripe the war must come, reason or no reason, for the justifications pleaded are invariably fictitious. War is, in short, a permanent human *obligation*. General Homer Lea, in his book, *The Valor of Ignorance*, plants himself squarely on this ground. Readiness for war is for him the essence of nationality, and ability in it the supreme measure of the health of nations.

Nations, General Lea says, are never stationary—they must necessarily expand or shrink, according to their vitality or decrepitude. Japan now is culminating; and by the fatal law in question it is impossible that her statesmen should not long since have entered, with extraordinary foresight, upon a vast policy of conquest—the game in which the first moves were her wars with China and Russia and her treaty with England, and of which the final objective is the capture of the Philippines, the Hawaiian Islands, Alaska, and the whole of our coast west of the Sierra Passes. This will give Japan what

her ineluctable vocation as a state absolutely forces her to claim, the possession of the entire Pacific Ocean; and to oppose these deep designs we Americans have, according to our author, nothing but our conceit, our ignorance, our commercialism, our corruption, and our feminism. General Lea makes a minute technical comparison of the military strength which we at present could oppose to the strength of Japan, and concludes that the islands, Alaska, Oregon, and Southern California, would fall almost without resistance, that San Francisco must surrender in a fortnight to a Japanese investment, that in three or four months the war would be over, and our Republic, unable to regain what it had heedlessly neglected to protect sufficiently, would then "disintegrate," until perhaps some Caesar should arise to weld us again into a nation.

A dismal forecast indeed! Yet not unplausible, if the mentality of Japan's statesmen be of the Caesarian type of which history shows so many examples, and which is all that General Lea seems able to imagine. But there is no reason to think that women can no longer be the mothers of Napoleonic or Alexandrian characters; and if these come in Japan and find their opportunity, just such surprises as *The Valor of Ignorance* paints may lurk in ambush for us. Ignorant as we still are of the innermost recesses of Japanese mentality, we may be foolhardy to disregard such possibilities.

Other militarists are more complex and more moral in their considerations. The *Philosophie des Kriegeres*, by S. R. Steinmetz, is a good example. War, according to this author, is an ordeal instituted by God, who weighs the nations in its balance. It is the essential form of the state, and the only function in which peoples can employ all their powers at once and convergently. No victory is possible save as the resultant of a totality of virtues, no defeat for which some vice or weakness is not responsible. Fidelity, cohesiveness, tenacity, heroism, conscience, education, inventiveness, economy, wealth, physical health and vigor—there isn't a moral or intellectual point of superiority that doesn't tell, when God holds his assizes and hurls the peoples upon one another. *Die Weltgeschichte ist das Weltgericht*; and Dr. Steinmetz does not believe that in the long run chance and luck play any part in apportioning the issues.

The virtues that prevail, it must be noted, are virtues anyhow, superiorities that count in peaceful as well as in military competition; but the strain on them, being infinitely intenser in the latter case, makes war infinitely more searching as a trial. No ordeal is comparable to its winnowings. Its dread hammer is the welder of men into cohesive states, and nowhere but in such states can human nature adequately develop its capacity. The only alternative is "degeneration."

Dr. Steinmetz is a conscientious thinker, and his book, short as it is, takes much into account. Its upshot can, it seems to me, be summed up in Simon Patten's word, that mankind was nursed in pain and fear, and that the transition to a "pleasure economy" may be fatal to a being wielding no powers of defense against its disintegrative influences. If we speak of the *fear of emancipation from the fear regime*, we put the whole situation into a single phrase; fear regarding ourselves now taking the place of the ancient fear of the enemy.

Turn the fear over as I will in my mind, it all seems to lead back to two unwillingnesses of the imagination, one aesthetic, and the other moral: unwillingness, first to envisage a future in which army life, with its many elements of charm, shall be forever impossible, and in which the destinies of peoples shall nevermore be decided quickly, thrillingly, and tragically, by force, but only gradually and insipidly by "evolution"; and, secondly, unwillingness to see the supreme theatre of human strenuousness closed, and the splendid military aptitudes of men doomed to keep always in a state of latency and never show themselves in action. These insistent unwillingnesses, no less than other aesthetic and ethical insistencies, have, it seems to me, to be listened to and respected. One cannot meet them effectively by mere counter-insistency on war's expensiveness and horror. The horror makes the thrill; and when the question is of getting the extremest and supremest out of human nature, talk of expense sounds ignominious. The weakness of so much merely negative criticism is evident—pacifism makes no converts from the military party. The military party denies neither the bestiality nor the horror, nor the expense; it only says that these things tell but half the story. It only says that war is *worth* them; that, taking human nature as a whole, its wars are its best protection against its weaker and more cowardly self, and that mankind cannot *afford* to adopt a peace economy.

Pacifists ought to enter more deeply into the aesthetical and ethical point of view of their opponents. Do that first in any controversy, says J. J. Chapman; *then move the point*, and your opponent will follow. So long as anti-militarists propose no substitute for war's disciplinary function, no *moral equivalent of war*, analogous, as one might say, to the mechanical equivalent of heat, so long they fail to realize the full inwardness of the situation. And as a rule they do fail. The duties, penalties, and sanctions pictured in the utopias they paint are all too weak and tame to touch the military-minded. Tolstoi's pacifism is the only exception to this rule, for it is profoundly pessimistic as regards all this world's values, and makes the fear of the Lord furnish the moral spur provided elsewhere by the fear of the enemy. But our socialistic peace advocates all believe absolutely in this world's values;

and instead of the fear of the Lord and the fear of the enemy, the only fear they reckon with is the fear of poverty if one be lazy. This weakness pervades all the socialistic literature with which I am acquainted. Even in Lowes Dickinson's exquisite dialogue, high wages and short hours are the only forces invoked for overcoming man's distaste for repulsive kinds of labor. Meanwhile men at large still live as they always have lived, under a pain-and-fear economy—for those of us who live in an ease economy are but an island in the stormy ocean—and the whole atmosphere of present-day utopian literature tastes mawkish and dishwatery to people who still keep a sense for life's more bitter flavors. It suggests, in truth, ubiquitous inferiority.

Inferiority is always with us, and merciless scorn of it is the keynote of the military temper. "Dogs, would you live forever?" shouted Frederick the Great. "Yes," say our utopians, "let us live forever, and raise our level gradually." The best thing about our "inferiors" today is that they are as tough as nails, and physically and morally almost as insensitive. Utopianism would see them soft and squeamish, while militarism would keep their callousness, but transfigure it into a meritorious characteristic, needed by "the service," and redeemed by that from the suspicion of inferiority. All the qualities of a man acquire dignity when he knows that the service of the collectivity that owns him needs them. If proud of the collectivity, his own pride rises in proportion. No collectivity is like an army for nourishing such pride; but it has to be confessed that the only sentiment which the image of pacific cosmopolitan industrialism is capable of arousing in countless worthy breasts is shame at the idea of belonging to *such* a collectivity. It is obvious that the United States of America as they exist today impress a mind like General Lea's as so much human blubber. Where is the sharpness and precipitousness, the contempt for life, whether one's own or another's? Where is the savage "yes" and "no," the unconditional duty? Where is the conscription? Where is the blood tax? Where is anything that one feels honored by belonging to?

Having said thus much in preparation, I will now confess my own utopia. I devoutly believe in the reign of peace and in the gradual advent of some sort of socialistic equilibrium. The fatalistic view of the war function is to me nonsense, for I know that war-making is due to definite motives and subject to prudential checks and reasonable criticisms, just like any other form of enterprise. And when whole nations are the armies, and the science of destruction vies in intellectual refinement with the sciences of production, I see that war becomes absurd and impossible from its own monstrosity. Extravagant ambitions will have to be replaced by reasonable claims, and nations must make common cause against them. I see no reason why all

this should not apply to yellow as well as to white countries, and I look forward to a future when acts of war shall be formally outlawed as between civilized peoples.

All these beliefs of mine put me squarely into the anti-militarist party. But I do not believe that peace either ought to be or will be permanent on this globe, unless the states pacifically organized preserve some of the old elements of army discipline. A permanently successful peace economy cannot be a simple pleasure economy. In the more or less socialistic future toward which mankind seems drifting we must still subject ourselves collectively to these severities which answer to our real position upon this only partly hospitable globe. We must make new energies and hardships continue the manliness to which the military mind so faithfully clings. Martial virtues must be the enduring cement; intrepidity, contempt of softness, surrender of private interest, obedience to command, must still remain the rock upon which states are built—unless, indeed, we wish for dangerous reactions against commonwealths fit only for contempt, and liable to invite attack whenever a center of crystallization for military-minded enterprise gets formed anywhere in their neighborhood.

The war party is assuredly right in affirming and reaffirming that the martial virtues, although originally gained by the race through war, are absolute and permanent human goods. Patriotic pride and ambition in their military form are, after all, only specifications of a more general competitive passion. They are its first form, but that is no reason for supposing them to be its last form. Men now are proud of belonging to a conquering nation, and without a murmur they lay down their persons and their wealth, if by so doing they may fend off subjection. But who can be sure that *other aspects of one's country* may not, with time and education and suggestion enough, come to be regarded with similarly effective feelings of pride and shame? Why should men not some day feel that it is worth a blood tax to belong to a collectivity superior in *any* ideal respect? Why should they not blush with indignant shame if the community that owns them is vile in any way whatsoever? Individuals, daily more numerous, now feel this civic passion. It is only a question of blowing on the spark till the whole population gets incandescent, and on the ruins of the old morals of military honor, a stable system of morals of civic honor builds itself up. What the whole community comes to believe in grasps the individual as in a vise. The war function has grasped us so far; but constructive interests may some day seem no less imperative, and impose on the individual a hardly lighter burden.

Let me illustrate my idea more concretely. There is nothing to make one indignant in the mere fact that life is hard, that men should toil and suffer

pain. The planetary conditions once for all are such, and we can stand it. But that so many men, by mere accidents of birth and opportunity, should have a life of *nothing else* but toil and pain and hardness and inferiority imposed upon them, should have *no* vacation, while others natively no more deserving never get any taste of this campaigning life at all—*this* is capable of arousing indignation in reflective minds. It may end by seeming shameful to all of us that some of us have nothing but campaigning, and others nothing but unmanly ease. If now—and this is my idea—there were, instead of military conscription, a conscription of the whole youthful population to form for a certain number of years a part of the army enlisted against *Nature*, the injustice would tend to be evened out, and numerous other goods to the commonwealth would follow. The military ideals of hardihood and discipline would be wrought into the growing fiber of the people; no one would remain blind as the luxurious classes now are blind, to man's real relations to the globe he lives on, and to the permanently sour and hard foundations of his higher life. To coal and iron mines, to freight trains, to fishing fleets in December, to dish-washing, clothes-washing, and window-washing, to road-building and tunnel-making, to foundries and stokeholes, and to the frames of skyscrapers, would our gilded youths be drafted off, according to their choice, to get the childishness knocked out of them, and to come back into society with healthier sympathies and soberer ideas. They would have paid their blood tax, done their own part in the immemorial human warfare against nature, they would tread the earth more proudly, the women would value them more highly, they would be better fathers and teachers of the following generation.

Such a conscription, with the state of public opinion that would have required it, and the many moral fruits it would bear, would preserve in the midst of a pacific civilization the manly virtues which the military party is so afraid of seeing disappear in peace. We should get toughness without callousness, authority with as little criminal cruelty as possible, and painful work done cheerily because the duty is temporary, and threatens not, as now, to degrade the whole remainder of one's life. I spoke of the "moral equivalent" of war. So far, war has been the only force that can discipline a whole community, and until an equivalent discipline is organized, I believe that war must have its way. But I have no serious doubt that the ordinary prides and shames of social man, once developed to a certain intensity, are capable of organizing such a moral equivalent as I have sketched, or some other just as effective for preserving manliness of type. It is but a question of time, of skillful propagandism, and of opinion-making men seizing historic opportunities.

The martial type of character can be bred without war. Strenuous honor and disinterestedness abound elsewhere. Priests and medical men are in a fashion educated to it, and we should all feel some degree of it imperative if we were conscious of our work as an obligatory service to the state. We should be *owned*, as soldiers are by the army, and our pride would rise accordingly. We could be poor, then, without humiliation, as army officers now are. The only thing needed henceforward is to inflame the civic temper as past history has inflamed the military temper. H. G. Wells, as usual, sees the center of the situation. "In many ways," he says, "military organization is the most peaceful of activities. When the contemporary man steps from the street of clamorous insincere advertisement, push, adulteration, under-selling and intermittent employment, into the barrack yard, he steps on to a higher social plane, into an atmosphere of service and coöperation and of infinitely more honorable emulations. Here at least men are not flung out of employment to degenerate because there is no immediate work for them to do. They are fed and drilled and trained for better services. Here at least a man is supposed to win promotion by self-forgetfulness and not by self-seeking. . . ."

Wells adds that he thinks that the conceptions of order and discipline, the tradition of service and devotion, of physical fitness, unstinted exertion, and universal responsibility, which universal military duty is now teaching European nations, will remain a permanent acquisition, when the last ammunition has been used in the fireworks that celebrate the final peace. I believe as he does. It would be simply preposterous if the only force that could work ideals of honor and standards of efficiency into English or American natures should be the fear of being killed by the Germans or the Japanese. Great indeed is Fear; but it is not, as our military enthusiasts believe and try to make us believe, the only stimulus known for awakening the higher ranges of men's spiritual energy. The amount of alteration in public opinion which my utopia postulates is vastly less than the difference between the mentality of those black warriors who pursued Stanley's party on the Congo with their cannibal war cry of "Meat! Meat!" and that of the General Staff of any civilized nation. History has seen the latter interval bridged over: the former one can be bridged over much more easily.

AN ATOMIC ARMS RACE AND ITS ALTERNATIVES¹

Irving Langmuir

WE NOW have atomic bombs and are accumulating materials that could be used for making them. This program is going ahead with a yearly expenditure of roughly 500 million dollars. It has been announced that Great Britain is planning to produce atomic bombs. On November 6, Molotov said, "We shall have atomic energy, too, and many other things."

An atomic armament race has thus started that brings insecurity to all nations. Yet every one of the United Nations desires future security more than almost anything else. International control of atomic energy and of materials used for atomic weapons is thus of the utmost urgency. If a method of control is not worked out, the only alternative seems to be the development of an atomic armament race which will undoubtedly end, as all previous armament races have ended, in war.

I shall attempt to analyze the successive stages in such an armament race. In the first stage the United States alone will have atomic bombs and will accumulate a stockpile. Other nations will be preparing to make them. During this time we are in a secure position. In the second stage one or more other nations will have begun to produce atomic bombs while the United States stockpile may become so great that we will have enough bombs to destroy practically all the cities of an enemy country. During this period we are still relatively secure. During the third stage many nations will have enough bombs to destroy practically all the cities of any enemy. During this stage no nation is secure. Since an attack by any nation would almost certainly be followed by retaliation, any lasting advantage of a surprise attack largely disappears.

If an atomic armament race continues long enough, it is probable that discoveries will be made by which the production cost of the bombs may be greatly decreased, or new types of bombs may be devised thousands of times more powerful. It has been estimated that about 10,000 bombs of the present type might destroy nearly all the cities of the United States. The area covered, however, would be about 100,000 square miles, which is roughly 3 per cent of the area of the United States.

During the fourth stage of the armament race, atomic bombs or radioactive poisons distributed over the country might destroy practically the

¹Reprinted by permission from *One World or None*, D. Masters and K. Way, editors (1946), McGraw-Hill Book Company.

whole area of the country, so that no effective retaliation could be offered. The victor in such a war would then have to dominate the whole world so effectively that he could not be endangered by other atomic bombs. The fourth stage in the atomic armament race, if it is allowed to proceed that far, will bring intolerable insecurity to most nations, so that the nation which feels that it is best prepared is almost forced to start a war to avoid danger of complete destruction.

The rate at which nations can progress through the four stages of the armament race depends not only on the difficulties inherent in atomic-bomb production but also, in very large part, on the motivation: Just how much effort do the various nations consider they can afford to make to attain their objectives?

The incentives that would lead to the effort are of two kinds: first, questions of prestige; second, the intensity of the feeling of insecurity. Such insecurity will probably ebb and flow according to the international situation. The fact that we are now the only nation possessing atomic bombs means that during the early stages in the armament race other nations will act largely according to their understanding and interpretation of American intentions. It is thus of particular significance that in the Truman-Attlee-King declaration of November 15, 1945, it was recognized that the United States, the United Kingdom, and Canada should "take an initiative in the matter."

Undoubtedly, Great Britain and Canada are the nations, outside the United States, that could first build atomic bombs. Churchill has already said, "It is agreed that Britain should make atomic bombs with the least possible delay and keep them in suitable safe storage."

But Russia, with her population of over 195 million in an area of about 9 million square miles, also has enormous resources in men and materials. During the years 1934-1940, Russia, instead of following a policy of appeasement like that of other nations, engaged in a vast program of military preparation not for purposes of aggression but for defense against German aggression. They did this even though it meant holding the standard of living far below what would have otherwise been possible. The military experts in Germany and America greatly underestimated the Russian military preparation, and they were taken by surprise at the power that Russia showed in driving back the German armies from Stalingrad to Berlin. The Russians built remarkably good planes, for many years holding the world's record for long-distance flight. . . .

The cost of an atomic-bomb project like our own would be small indeed compared to the expenditures that Russia made in preparation for the recent war. Since atomic bombs are roughly ten times cheaper than other weapons

in terms of equal effectiveness, the over-all cost of even a large atomic-bomb program might be much less than Russia would normally expect to devote to an army and navy of the conventional types.

The Russians give the impression of being a strong, rough, pioneering people who are proud of their accomplishments during the recent war. Questions of prestige would, therefore, probably play a strong part in stimulating them to learn to control atomic energy. If the international situation develops in such a way that they feel increasing insecurity, I believe that the Russians might launch a program for the development of atomic bombs on a far greater scale than that likely to be undertaken by any other country. Russia can mobilize her resources for such a program just as she did in her preparations for the war with Germany, devoting 10 or even 20 per cent of her capacity to a five- or ten-year plan. Before the war the United States spent only about 0.04 per cent of its national income for research in pure science and 0.25 per cent for industrial research. During the war total research expenditures, including the atomic-bomb project, rose to perhaps 1.5 per cent.

In such an extensive project the efficiency of the Russians might at first be low, but this would increase rapidly and steadily as they progressed with their plan, just as it has in all of their major undertakings. They are quite used to big projects. When I was in Russia recently, I was told of a pilot plant, costing nearly 100 million dollars and nearing completion, for the continuous operation of a large blast furnace using oxygen instead of air. Experimental runs that were made before this plant was designed proved that a blast furnace of a given size gave about five times the output when oxygen was substituted for air. A 2-billion-dollar project was under consideration for converting the whole steel industry of Russia, which would result in a large saving in the cost of steel and iron.

If an armament race continues, I believe the Russians may reach stage two (that is, they will have begun to produce bombs) within about three years. Thereafter, however, there is a definite possibility that Russia may accumulate atomic bombs far faster than we do, so that they may get to stages three or four even before we do. The advantages they have in such a race are

1. They have a large population; it can be regimented and is willing to sacrifice living standards for a long-range defense program.
2. They have a remarkable system of incentives, which is rapidly increasing the efficiency of their industrial production.
3. They have no unemployment.
4. They have no strikes.
5. They have a deep appreciation of pure and applied science and have placed a high priority on it.
6. They have already planned a far more extensive program in science than is contemplated by any other nation.

The rapidity with which a large-scale atomic-bomb project could develop in Russia, given incentives of the kind mentioned above and failing control mechanisms, would ultimately depend upon her ability to train scientists. It has recently been stated that there are now in Russia 790 universities and that the number of students has been increasing steadily in spite of the war. They believe that their educational methods have improved very greatly. I was told, for example, that they discovered during the war that they could train skilled workers for industry in a far shorter time than was previously thought possible.

Even so, many people have believed that Russia has not a sufficient number of scientists nor the educational facilities for the training of scientists and has not sufficient skilled labor to build atomic bombs within a reasonable time. General Groves, for example, in his testimony before the Atomic Energy Committee of the Senate, thought it might take Russia as long as twenty to sixty years to build atomic bombs.

I had an opportunity to become familiar with some branches of scientific development in Russia by attending the meetings in Moscow and Leningrad in June, 1945, held in commemoration of the 220th anniversary of the founding of the Academy of Sciences of the U.S.S.R.

The plenary meetings of the Academy, which were held in large opera houses with about 3,000 people present, were devoted to general papers on the history of science in Russia and in other countries and on selected subjects of wide general interest. More than 100 foreign scientists had been invited to attend these meetings. Most of our time during the eighteen days in Moscow and Leningrad was spent in conferring with scientists in some of the seventy-eight institutes of the Academy. I visited several institutes, particularly in the fields of chemistry and physics. I found that the Russian scientists talked freely about their work and showed me through their laboratories. I was much impressed by the friendliness of all of these men and by their wholehearted devotion to science. They were all clearly working on problems that had been planned by scientists without undue political control. In fact, they had been able during the war to carry on scientific work of a kind that would have been impossible in the United States. A great deal of the work was of long-range character, often planned to lay sound foundations for postwar industrial developments. They had been able to defer men from active military service for such work.

Among the men whom I met, there was clearly a desire for a long period of peace and security. Their plans indicated that they hoped and believed that this would be possible. During the years 1934-1940 there had been a great feeling of insecurity, for they said they all felt the danger of German

aggression. In June, 1945, they showed great relief at having reached the end of this period of insecurity: The war against the Axis powers had been won. They were planning to repair the damage in the devastated areas but expected at the same time to lay the foundations for a future standard of living as high as or higher than that in the United States. Science, pure and applied, was to play a dominant role in this program. The building of the Academy of Sciences had recently been renovated and improved, but I was shown plans for a new building at least five or ten times larger than the present one.

The social position of scientists in Russia, as well as the provision of summer homes, automobiles, etc., are held out as incentives for men to become leaders. At the meeting of the Academy about 1,400 honors were given; for example, 13 scientists received the Hero of Socialist Labor, the highest honor; 196 received the Order of Lenin, which only a few weeks ago was given to Molotov. An article entitled "Science Serves the People," which appeared in the *Moscow News* at this time, contained the following:

. . . Never before has the scientist been accorded such attention by the state and such esteem by society as in the Soviet Union. . . .

. . . The state provides the maximum amenities for life and facilities for work to the scientist and assures a comfortable life to his family after his death. . . .

It is extraordinary that this meeting of the Academy was held only about a month after the end of the war in Europe. The lavishness of the entertainment—for example, a banquet for 1,100 people in the Kremlin with Stalin in attendance and Molotov as toastmaster—showed the importance the Russians attach to science. In all the speeches great emphasis was laid on the international character of science. It was stated that scientists the world over had always cooperated with one another, national antagonisms playing no role. Hope was expressed that in other fields nations might learn to cooperate in a similar way.

The use of the atomic bombs in August against Japan must have come as a great shock. Most of the Russians probably felt that the security that they thought they had reached was suddenly ended, and they were brought to a state of insecurity like that of the years 1934-1940. I believe that the difficulty in reaching international agreements with Russia before the Moscow conference was caused by a natural reaction arising from their disappointment regarding future security.

We can better understand Russian doubts about our policy of holding atomic bombs as a "sacred trust" by asking ourselves: What would American public opinion now be if we had had no atomic-energy development, but if,

near the end of the war, atomic bombs had been dropped on Berlin by the Russians without adequate consultation? Would our insecurity be entirely relieved if the Russian government, a few months later, had announced that it held an increasing stockpile of atomic bombs as a sacred trust?

The declaration of November 15 holds out the hope that through the United Nations Organization there may be established "an atmosphere of reciprocal confidence in which political agreements and cooperation will flourish."

A basis for cooperation and for ultimate world control of the atomic bomb may be sought by considering, first, matters of common agreement: No nation desires world conquest, each desires security, freedom from unemployment, better conditions for labor, and, in general, a higher standard of living for its people. Many other points of agreement can be found.

There are serious difficulties in world control. We must take into account that Russia and the United States do not understand each other very well. We don't like their form of government and they don't like ours. They don't like our strikes and unemployment, and we don't like their control of the press and public opinion. They find many statements in our newspapers that they know are false, but apparently we wish to believe these statements. The Russian newspapers attribute everything they don't like about America to the control by capitalists, plutocrats, or the bourgeoisie. They say that they have the only 'true democracy, but we say they have no democracy at all. Under such conditions it is hard to allay fears or distrust.

Nations differ fundamentally in their forms of government. They can agree, however, to recognize the right of each to its own form of government within its own borders. Disagreements have arisen of late regarding the governments established in conquered and liberated countries.

General policies for the United States have been proposed in the Four Freedoms and in the Atlantic Charter. The first of the Four Freedoms given by President Roosevelt in January, 1941, is "freedom of speech and expression . . . everywhere in the world." In the Atlantic Charter proposed by President Roosevelt and Prime Minister Churchill there are eight articles. The second article states that our nations "desire to see no territorial changes that do not accord with the freely expressed wishes of the people concerned." The third declares that they "respect the right of all people to choose the form of government under which they will live," and they wish "to see sovereign rights and self-government restored to those who have been forcibly deprived of them."

There is a general American belief, which makes it hard for other na-

tions to cooperate with us, that world problems can be solved by slogans or idealized principles even when these are really not applicable to concrete situations. The troubles caused by applying some of our ideals to other nations can be understood by considering the differences in meanings attached to democracy and the freedom of the press in the United States and in Russia.

In referring to democracy the Russians are apt to use a standard phraseology. A good example is given by the following quotation from an article entitled "Soviet Democracy," by Professor V. Baushko, published in the *Soviet News*, November 3, 1945:

There can be no consistent democracy in bourgeois countries—not even in those of them whose constitutions proclaim these rights. Wherever society is divided between the exploited and the exploiters, there can be no equality. . . . There can be no freedom of speech, press or association for the toilers if print shops and paper and even meeting halls belong to the bourgeoisie. . . .

In the USSR, on the other hand, all governmental power belongs to the people, exploitation of man by man has been done away with, there are no classes of exploiters, democratic rights and liberties are guaranteed by the Socialist economy . . . racial and class hatred has been eradicated and supplanted by friendship in relations of the peoples, while science and culture have been placed at the service of the people.

We believe that in the Balkan states and in Japan the peoples should have democratic forms of government, and Russia seems to agree to this. However, in Japan we pattern the proposed democracy after our own, but we do not agree that Russia should pattern the governments of the conquered and liberated Balkan states in accordance with her conception of democracy. If we are to get along with other nations that have different ideals, we cannot insist that our concepts of freedom and democracy shall prevail everywhere. Such matters involve compromise and wise statesmanship. They are not to be settled by means of slogans.

The freedom of the press is another point in which we differ from Russia. The following is a quotation from Molotov's report of November 6, 1945, on the occasion of the twenty-eighth anniversary of the October Revolution:

The strength of the Soviet system lies in its closeness to the people. As distinct from parliamentary democracy, Soviet democracy is truly popular in character. Therefore, the Soviet state, as a state of a new type, has tasks which are not inherent in states of the old type. Thus, the duties of the Soviet state include the political education of the Soviet people in the spirit of safeguarding the interests of world peace, in the spirit of establishing friendship and cooperation among the

peoples, which . . . calls for the exposure of all attempts to prepare a new aggression and the regeneration of fascism. . . . Under the Soviet Constitution it is a crime to preach hatred among nations, antisemitism, etc., just as praising of crime, robbery, and violence against man is forbidden in our press. Such "restrictions" are as natural under Soviet democracy as things quite opposite are unfortunately natural for some other states. In some countries freedom of speech and press are still interpreted in such a way that mercenary servants of fascism do not even have to don masks in order to carry on unbridled propaganda for aggression and fascism. . . .

It is clear that the Russians have a radically different concept of the freedom of the press from that which is current in America. We certainly cannot demand, in accord with the first of the Four Freedoms, that our kind of freedom of the press shall exist "everywhere in the world." The Russians would see no reason why their ideas on this subject should not apply to the Balkan states if ours are to prevail in Japan.

Americans often have no confidence in the Russian press because it is government controlled, but we fail to recognize that a great deal of distorted news is introduced into our papers even by propaganda agencies with malicious intent. A good example was the statement in our papers, reiterated by Secretary Stettinius at the San Francisco Conference, that sixteen Poles representing the Polish government in London had been invited to Russia for a conference and had then been arrested and were being held for trial. This statement was later denied by Stettinius. Ambassador Harriman in Moscow told us that the sixteen Poles had not been invited to Moscow for a conference but were arrested in Poland for distributing arms for use against the Russians. I attended some of the sessions of the trial of the sixteen Poles. I believe that they had a fair trial. Many of them were acquitted. The maximum penalty was ten years' imprisonment. The defendants were proud of their actions against Russia, and one of them said that he was willing to fight against Russia if necessary to help Poland acquire an outlet to the Black Sea. I have never found anyone in America who had heard the denial of the original false story. It was probably published inconspicuously. Such unfairness produces a bad effect on our relationships with Russia.

It is highly desirable that there should be frank discussions between the Russian government and the American government regarding the troublesome effects caused by differences between our concepts of democracy and freedom of the press. One cause for the lack of mutual understanding between the United States and Russia is the fact that so few people of each nation travel in the other. It was pointed out recently by Edgar Snow that there are only 260 Americans in Russia and about 2,000 people carrying

Russian passports in the United States. The facilitation of travel between the two countries would help greatly. It is encouraging to find that Molotov in his address of November 6 recognized the desirability of this intercourse. He said, "Acquaintance with the life of other nations would certainly be a benefit to our people and would broaden their outlook."

Removal of restrictions on the circulation of American newspapers and periodicals in Russia and Russian articles in the United States will make for much better relations. We must remember that in our country anyone who talks too much about Russia or approves of Russian practices is liable to be "investigated" by the House Committee on Un-American Activities. A very hopeful sign was Russia's recent invitation to newspaper correspondents to visit all parts of Russian-occupied territory.

One of the recommendations made in the November 16 declaration was that we should exchange scientists and scientific information among nations. Russia started such action in June, 1945, by inviting about 120 foreign scientists to Russia and giving them full information regarding scientific work.

Russia publishes a majority of its important scientific papers in English as well as in Russian. They have started to teach English to all school children in Russia and even in Siberia. Russians are inveterate readers and, if they can read English books and journals, a big step toward better understanding will be reached.

An interchange of scientists would also pave the way for effective methods of inspection, which will probably be needed for an effective world control. . . .

I believe that if there is a sincere desire for security on the part of all nations, there will be a universal insistence on an effective inspection system. This could involve the inspection of sources of uranium, and, of course, the inspection of factories making materials used for atomic energy.

It was pointed out by Bernard Brodie (*The Atomic Bomb and American Security*, published by the Yale Institute of International Studies, 1945) and again emphasized strongly by Dr. Urey in his testimony before the Senate Committee on Atomic Energy that inspection would be very much facilitated if large-scale plants for making U-235 or plutonium for power purposes did not exist.

The greatest peacetime benefits to be derived from our new knowledge of nuclear reactions will probably come from its indirect effect in speeding up progress in science leading to great discoveries in biology, chemistry, and physics. These benefits can probably be obtained by small-scale production of radioactive substances by one or two piles. Large-scale use of atomic

power would involve the production of materials that could be quickly converted to use in the atomic bombs. This would present very serious inspection problems. The commercial use of atomic power as a substitute for coal and oil will for many years be a matter of trivial importance as compared to the dangers that might result in the existence of atomic bombs.

It would, therefore, be desirable to destroy all atomic bombs, all large plants for making them, and all reserves of elements of U-235 and plutonium if these should prove serious stumbling blocks in reaching effective world control and necessary inspection.

It has been proposed that stockpiles of atomic bombs should be turned over to the Security Council of the United Nations Organization. It is hard to conceive that a reserve of atomic bombs would serve any useful purpose. The atomic bomb is not a police weapon.

If a step-by-step process finally brings the envisioned effective control of atomic weapons, world confidence will grow and a mechanism will then exist by which other weapons may be outlawed or controlled. We may some day come to regard the atomic bomb as the discovery that made it possible for mankind to bring an end to all war.

WHY MEN FIGHT¹

Will Durant

PERSPECTIVE

IN THE year 1830 a French customs official unearthed, in the valley of the Somme, strange implements of flint now recognized by the learned as the weapons with which the men of the Old Stone Age made war. These stones are called *coups de poing*, or "blows of the fist," for one end was rounded to be grasped in the hand, while the other end was pointed for persuasion. With these modest tools of death, it seems, Neanderthal men from what is now Germany, and Cro-Magnon men from what is now France, fought fifty thousand years ago for the mastery of the continent, and, after a day of lusty battle, left perhaps a score of dead on the field. Twenty years ago, modern Germans and modern Frenchmen fought again, in that same valley, for that same prize, with magnificent tools of death that killed ten thousand

¹From *The Saturday Evening Post*, July 10, 1937.

men in a day. One art alone has made indisputable progress in history, and that is the art of war.

For five hundred centuries, two thousand generations have struggled for that terrain in a calendar of wars whose beginning is as distant as its end. Our own children rest there, some of them, lured by fear or nobility into that ancient strife. Even the sophisticated mind, accustomed to magnitude and marvels, is appalled by the panorama of historic war, from the occasional brawls and raids of normally peaceful "savages," through the sanguinary annals of Sumer, Babylonia and Assyria, the endless fratricide of the Greek city states, the merciful conquests of Alexander and Caesar, the brutal triumphs of Imperial Rome, the holy carnage of expanding Islam, the glorious slaughters of Genghiz Khan, Tamerlane's pyramid of skulls, the destruction of Vijayanagar, the Hundred Years' War, the War of the Spanish Succession, the Seven Years' War, the English, American, French, and Russian Revolutions, the Civil Wars of England and America, the Napoleonic Wars, the War of 1812, the Crimean War, the Franco-Prussian War, the Spanish-American War, the Boer War, the Russo-Japanese War, the First World War, the suicide of Spain, the Sino-Japanese War, the Second World War. . . . This, in our pessimistic moments, seems to be the main and bloody current of history, beside which all the achievements of civilization, all the illumination of letters and the arts, all the tendernesses of women and the courtesies of men, are but graceful incidents on the bank, helpless to change the course or character of the stream.

Such a chronicle of conflict exaggerates, without doubt, the rôle of war in the records of our race. Strife is dramatic, and, to most of our historians, peaceful generations appear to have no history. So our chroniclers leap from battle to battle, and unwittingly deform the past into a shambles. In our saner moments we know that it is not so; that lucid intervals of peace far outweigh, in any nation's story, the mad seizures of war and revolution; that the history of civilization—of science and invention, law and morals, religion and philosophy, literature and art—runs like hidden gold in the river bed of time. Even war cannot quite blacken the picture of man's development.

Nevertheless, war has always been. Will it always be? What are its causes in the nature of men and in the structure of societies? What are its effects, for good or evil, upon the soul, the species, and the state? Can it be prevented, or diminished in frequency, or in any measure controlled? Let us consider these questions as objectively as may be permitted to men and women standing on the brink of what may be the most brutal war that history has ever known.

WAR AND PEACE

CAUSES

The causes of war are psychological, biological, economic, and political—that is, they lie in the impulses of men, the competition of groups, the material needs of societies, and fluctuations of national power.

The basic causes are in ourselves, for the state is an enlarged picture of the soul. The five major instincts of mankind—food-getting, mating, parental love, fighting, and association—are the ultimate sources of war. Our inveterate habit of eating is the oldest and deepest cause of war. For thousands, perhaps millions, of years, men were uncertain of their food supply. Not knowing yet the bounty of the soil, they trusted to the fortunes of the hunt. Having captured prey, they tore or cut it to pieces, often on the spot, and gorged themselves to their cubic capacity with the raw flesh and the hot gore; how could they tell when they might eat again? Greed is eating, or hoarding, for the future; wealth is originally a hedge against starvation; war is at first a raid for food. All vices were once virtues, indispensable in the struggle for existence; they became vices only in the degree to which social order and increasing security rendered them unnecessary for survival. Once men had to chase, to kill, to grasp, to overeat, to hoard; a hundred millenniums of insecurity bred into the race those acquisitive and possessive impulses which no laws or ideals, but only centuries of security, can mitigate or destroy.

The desire for mates and the love of children write half of the private history of mankind, but they have only rarely been the direct causes of war. The fighting instinct enters more obviously into the analysis, even if it operates most freely in persons above military age. Nature develops it vigorously as an aid in getting or keeping food or mates; it arms every animal with organs of offense and defense, and lends to the physically weaker species the advantages of cunning and association. Since, by and large, those individuals and groups survived that excelled in food-getting, mate-getting, caring for children, and fighting, these instincts have been selected and intensified with every generation, and have budded into a hundred secondary forms of acquisition, vengence, kindness, and contention.

As the quest for food has grown into the amassing of great fortunes, so the fighting instinct has swelled into the lust for power and the waging of war. The lust for power is in most men a wholesome stimulus to ambition and creation, but in exceptional men, dressed in great and lasting authority, it becomes a dangerous disease, an elephantiasis of the soul, which goads them on to fight a thousand battles by proxy. Nietzsche, nervous and sickly and disqualified for military service, thrilled at the sight and sound of cavalry galloping along a Frankfort street, and at once composed a paean in honor

of war and the "will to power." Mussolini and Hitler have read Nietzsche, and may, by replacing parliaments with supermen, and the religion of peace with the religion of war, justify the gentle maniac's prediction that the future would divide history into B. N. and A. N.—Before Nietzsche and After Nietzsche. Nothing is so improbable as the future.

The instinct of flight is hardly a source of war, though war gives it an extensive field of operations. The instinct of action enters into the picture as a love of adventure, an escape from relative and routine. A richer source is the instinct of association. Men fear solitude, and naturally seek the protection of numbers. Slowly a society develops within whose guarded frontiers men are free to live peaceably, to accumulate knowledge and goods, and to worship their gods. Since our self-love overflows into love of our parents and children, our homes and possessions, our habits and institutions, our wonted environment and transmitted faith, we form in time an emotional attachment for the nation and the civilization of which these are constituent parts; and when any of them is threatened, our instinct of pugnacity is aroused to the limit determined by the natural cowardice of mankind. Such patriotism is reasonable and necessary, for without it the group could not survive, and the individual could not survive without the group. Prejudice is fatal to philosophy, but indispensable to a people.

Put all these passions together, gather into one force the acquisitiveness, pugnacity, egoism, egotism, affection, and lust for power of a hundred million souls, and you have the psychological sources of war. It may be that these sources are not completely instinctive, not inevitably rooted in the blood; contemporary psychology is chary of instincts, and suspects that many of them are but habits formed in early years through the imitation of corrupt adults. We need not spend ourselves on the dispute, for in any case the practical problem would remain—we should still have to change the parents before we could change the children.

The experience of Russia indicates that the business of pursuing food and mates, of fighting and gathering together, of loving children and money and power, is more deeply ingrained in human character than fashionable theory believes. Or was it that the lenience of the OGPU allowed too many adults to survive? It is hard to build tomorrow's society with the day-after-tomorrow's men. *Historia non facit saltum*: History, like nature, makes no leaps.

These psychological impulses, taken in their social mass, become the biological sources of war. The group, too, as well as the individual, can be hungry or angry, ambitious or proud; the group, too, must struggle for existence, and be eliminated or survive. The protective fertility of organisms soon multiplies mouths beyond the local food supply; the hunger of the parts, as in the body,

becomes the hunger of the whole, and species wars against species, group against group, for lands or waters that may give more support to abounding life. Euripides, twenty-three hundred years ago, attributed the Trojan War to the rapid multiplication of the Greeks. "States that have a surplus population," said the ancient Stoic philosopher Chrysippus, "send great numbers out to colonies, and stir up wars against their neighbors." If that was the case when infanticide and Greek friendship were tolerated as means of controlling population, consider the results where statesmen encourage fertility. For then the birth rate must be raised to provide soldiers for war; war must be waged to conquer land for an expanding population; and population expands because the birth rate is so high. It is a very pinwheel of logic, bright and frail, a form of reasoning puzzlingly whimsical until we add its concealed premise—the will to power.

Group hunger begets group pugnacity, and pugnacity develops in the group, as in the individual, organs of protection and attack. In the group these are called armament; and when they are powerful, they may themselves, like the boy's biceptual consciousness, become a secondary source of war. On either scale some armament is necessary, for struggle is inevitable, and competition is the trade of life. The tragedy of our ideals is that we hitch them to the falling stars of equality and peace, while nature blithely bases her inescapable machinery of development upon difference and inequality of endowment and ability, upon competition and war; what chance have our ideals, nurtured in the mutual aid of the family, against that supremest court of all? Even mutual aid becomes an organ of struggle: We cooperate as individuals that we may the better compete as groups; morality and order have been developed because they strengthened the group in the inexorable competition of the world. Only when another star attacks us will the earth know internal peace; only a war of the planets can produce, for a moment, the brotherhood of man.

These psychological and biological forces are the ultimate origins of human conflict. From them flow the national rivalries that generate the proximate causes of war—those economic and political causes with which superficial analysis so readily contents itself.

The basic economic cause is rivalry for land: Land to receive a designedly expanding population, land to provide material resources, land to open up new subjects to conscription and taxation. So the ancient Greeks fought their way through the Aegean isles to the coasts of Asia Minor and the Black Sea, and through the Mediterranean to Africa, Sicily, Italy, France, and Spain; so the English spread through the world in the last two centuries; so the Italians begin to spread today. There is, in history, a law of colonial expansion almost

as explosive as any law of expansion in physics: Whenever a population fails to exploit the resources of its soil, it will sooner or later be conquered by a people able to exploit those resources, and to pour them into the commerce and uses of mankind.

These ancient provocations to conquest have been sharpened and magnified by the Industrial Revolution. To make war successfully a modern nation must be wealthy; to be wealthy it must develop industry; to maintain industry it must, in most cases, import food, fuel, and raw materials; to pay for these it must export manufactured goods; to sell these it must find foreign markets; to win these it must undersell its competitors or wage successful war. As likely as not, it will make war for any of the goods it must import, or for control of the routes by which it imports them.

Even in antiquity semi-industrial Athens waged war for the control of the Aegean, the Hellespont, and the Black Sea, because it was dependent upon Russian grain; Rome had to conquer Egypt because it needed markets for its handicrafts and fortunes for its politicians. Egyptian wheat, Near Eastern oil, and Indian cotton explain many a battle in British history; Spanish silver explains the wars of Rome with Carthage; Spanish copper, not Fascist theory, explains in our time the German help to the insurgent forces in Spain. Our sinless selves had a taste for sugar in 1898; and far back in 1853 we pointed our presents and cannon at a frightened shogun and persuaded him to allow a peaceful, agricultural, self-contained nation to transform itself into industrial, imperial, militaristic Japan. Those chickens have come home to roost.

The business cycle adds its own contribution to the causes of modern war. Since men are by nature unequal—some strong and some weak, some able and some (as they tell us) virtuous—it follows that in any society a majority of abilities will be possessed by a minority of men; from which it follows that sooner or later, in any society, a majority of goods will be possessed by a minority of men. But this natural concentration of wealth impedes the wide spread of purchasing power among the people; production, perpetually accelerated by invention, leaps ahead of consumption; surpluses rise and generate either depression or war. For either production must stop to let consumption catch up, or foreign markets must be found to take the surplus unbought at home. Foreign markets can be secured by underselling competitors or defeating them in war. To undersell our competitors is impracticable; our standard of living is too high for that; to lower it to the level of Japan's would bring revolution; apparently the choice is between depression and war. But another major depression, possibly made worse through the increased displacement of costly labor by economical machines, might also

bring revolution. What is left but war—or an unprecedented change in the behavior of men?

Add a few political causes, and our recipe for war will be complete. The first law of governments is self-preservation; their appetite grows by what they feed on, and they are seldom content. But further, the distribution of power among nations is always changing—through the discovery or development of new natural resources, through the rise or decline of population, through the weakening of religion, morals, and character, or through some other material, or biological or psychological circumstance; and the nation that has become strong soon asserts itself over the nation that has become weak. Hence the impossibility of writing a peace pact that will perpetuate a *status quo*; hence the absurdity of Article X of the League of Nations Covenant; hence the failure of sanctions and the breakdown of the Treaty of Versailles. Excellent indeed is the peace treaty that does not generate a war.

These, then, are the causes of war. How natural it seems now, in the perspective of science and history; how ancient its sources and how inscrutable its destiny!

Is it any wonder that peace is so often but invisible war, in which the nations rest only to fight again?

EFFECTS

Consider briefly the effects of war. We think of these too often, too seldom of the causes. A reminding summary will suffice.

There are psychological effects. A certain exaltation of spirit may come to a country embarked upon what it believes to be a just war; the mind and heart of the people are unified, hyphens drop out, and the diverse elements of the population are more closely fused into a homogeneous nation. The citizens acquire habits of order and discipline, of courage and tenacity; if they are not destroyed, they are made stronger. Against these gains there is the silent gloom of parents and children bereaved, the disorders of demobilization, the demoralization of men new-trained to habits of violence, promiscuity, and deceit.

For a time there is a revulsion against war: pacifism flourishes so long as the evils of war are fresh in the memory; generous men like the Abbé of St. Pierre and Immanuel Kant and Woodrow Wilson offer plans for perpetual peace, and many humane resolutions are made. But as a fresh generation grows up, pacifism subsides; aged reminiscence idealizes the past, and the young are ready to believe that war is 99 per cent glory, and only 1 per cent diarrhea. War loses some of its terrors; to give one's life for one's country is

again sweet and beautiful; and to die in bed becomes a shameful fate reserved for noncombatants and generals.

Biologically, war reduces the pressure of population upon the means of subsistence—which is an academic way of saying that some millions of people have been killed. Probably as a result of this, the birth rate has, before our Malthusian days, risen after war; and for some unknown reason, the ratio of male to female births has increased. Dysgenic and eugenic processes go on side by side. The strong and brave go to meet their deaths; the weak remain, and the timid return, to multiply their kind. Pugnacity and brutality are diminished by the superior death rate of the pugnacious and the brutal, both in war and in peace. But usually the finer, more cultured and artistic societies are crushed out, or dominated, by the cruder and more warlike groups: Athens by Sparta, Greece by Macedonia and Rome, T'ang China by the Tatars, Sung China by the Mongols, Gupta India by the Huns, Rome by the barbarians, Renaissance Italy by France, France by Germany, Samurai Japan by the United States. History is a war between war and art, as life is a war between life and death; life and art are always defeated, and always reborn.

To most participating nations, a modern war brings complex economic results. Science and industry are occasionally advanced by researches derived from the stimulus and energy of war. Life and property are destroyed; vast sums are consumed in armament; impossible debts accumulate. Repudiation in some form becomes inevitable; currencies are depreciated or annulled, inflation relieves debtor governments and individuals, savings and investments are wiped out, and men patiently begin to save and lend again. Over-expansion in war is followed by a major depression in peace. International trade is disrupted by intensified nationalism, exalted tariffs, and the desire to develop at home all industries requisite in war. The vanquished are enslaved—physically, as in antiquity, financially and by due process of law today. The victorious masses gain little except in self-conceit; the ruling minority among the victors may gain much in conquered lands, markets, spheres of influence, supplies, and taxable population. This is the little point that Sir Norman Angell forgot.

Politically, war may bring, to the conquered, revolution; to the victors, a strengthened government, the domination of the exchequer by returning soldiers, and the transformation of good generals into bad statesmen.

The methods and institutions that won the war tend to spread abroad and to replace the methods and institutions that lost. The pride of triumph and the appetite for spoils encourage further war, until men and materials are thrown recklessly into the lap of Mars, and the victor, like Assyria and Rome, destroys itself with its victories.

NOSTRUMS

If the foregoing analysis is substantially correct, we shall be spared from any detailed examination of the usual plans for ending war; it is clear that most of these plans have ignored the multiple and tenacious roots of war in the nature of man.

William James, in his kindly way, hoped that the enrollment of the nation's youth, for a year or two, in a wideflung "war against Nature" would give creative expression to the impulses of action, adventure, and association, and so provide a "moral equivalent for war." It is evident that such a procedure would not offer an outlet for the other and major causes of international strife.

The League of Nations, except under Briand and Stresemann, was a conspiracy of the victors to preserve the gains they had made; it had to fail as soon as the fertility and industry of the defeated had altered the balance of national power left by the Treaty of Versailles. An organization of peace designed to perpetuate the spoils of war defeats itself by definition. The life of nations cannot be strait-jacketed into immutability.

Pacifism would be a cure for war, and doubtless for sovereignty, if it could survive the call to arms or the visible peril of attack. Pacifism in England, in our time, was strong enough to endanger the British Empire through unpreparedness and timidity; but a few Fascist twists of the Lion's tail restored the latent vigor of the beast, and pacifists voted great sums for rearmament. A wise people will love peace and keep its powder dry.

Vague appeals to the conscience of mankind to put an end to war have had little effect in history, for there is no conscience of mankind. Morality is a habit of order generated by centuries of compulsion; international morality awaits international order; international order awaits international force. Conscience follows the policeman.

An effective approach to the problem of war will proceed, not by large and generous emotions but by the specific study and patient adjustment of specific causes and disputes. Peace must be planned and organized as realistically as war—with provision for every factor, and prevision for every detail. This cannot be done in an occasional moment stolen by statesmen from internal affairs; it requires the full-time attention of able minds. It should be a major function of the Department of State to wage peace vigorously and continuously on every front; to isolate the germs of war at their source and to sterilize them with understanding and negotiation. It is our good fortune that our Department of State is headed by Cordell Hull, a man who has a will, rather than merely a wish, for peace.

If now we look again at the causes of war, we shall recognize at once that, even with the best will and intelligence available, these causes can be at best mitigated, but not soon removed. We may slowly lessen the greed that breeds war, by reducing the economic insecurity of individuals and states. As the food supply becomes more secure, fear and pugnacity will decrease. As painful taxes melt back into the public mint the great fortunes generated by the contact of free ability with great natural resources, the stimulus to excessive acquisition will be reduced. Perhaps in time we shall distribute among a cabinet of first-class men appointed by and responsible to Congress, many of the burdens and powers now unbearably concentrated in the presidency; then the temptations and opportunities of the will to power will be diminished, though doubtless superior ability will still polarize power to its purposes. Possibly, the Civilian Conservation Corps can be developed as a "moral equivalent" for the impulses to action, wanderlust, adventure, and association. Conceivably, religion may achieve again the international unity and influence by which it reduced, in the Middle Ages, the frequency, extent, and barbarity of war. The slow internationalization of culture through greater ease of communication and travel, and the restoration of trade in ideas as well as goods, may diminish the egotism in patriotism, as happened in the Hellenistic world, and may win more adherents to the International of the Mind. How could a people trained to love art and music go to war with Italy or Germany, or a people matured to relish great literature make war upon England, Russia, or France?

Since the chief biological source of war is the pressure of population upon the means of life, the falling birth rate in the democratic countries is a subtle stimulus to peace. The rise of the birth rate in Germany and Russia is probably temporary; even dictators are helpless before the great tides of imitation that change the mores, or customs, of mankind. It may be possible—after the next holocaust—to organize international agreements pledging governments to refrain from artificial provocations to fertility. Such a move, however, would demand as a prerequisite the reduction of the economic incentives to war.

Those incentives are so numerous and powerful that each of them should be the major concern of an international commission specifically appointed for its consideration and adjustment. There are so many specialists, economists, and diplomats lying about—to use this verb in a purely geographical sense—that we might well distribute them into commissions severally assigned to examine the economic causes of war, to hear the disputing groups patiently, to investigate possibilities of conciliation, to do their work without the explosive excitement of publicity, and to make specific and practicable recommendations to their governments.

One such commission would study the problem of fertility, and seek territorial outlets for congested populations; another would consider the access of agriculturally limited peoples to foreign food supplies; another, the access of industrial nations to foreign or colonial raw materials and fuels; another, the breaking down of barriers to world trade; another, the opening of opportunities to investment and enterprise. It might be economical to offer to Germany and Italy access to coal and iron, copper and cotton and wheat, in return for cooperation in the reduction of armaments, imperialistic sortics, birth bonuses, and warlike orations. If the democratic nations prefer the arbitrament of battle to such tentatives of peace, it will be hard to absolve them from partial responsibility for the next world war. It is true that nations so aided would be strengthened, but they would be less dangerous in their prosperity than in their need.

Meanwhile, it is good to organize peace throughout the Western Hemisphere, and to give an example of pacific policy at home. It is good to support democracy wherever we can do it without war; for democracies are less likely to make war than nations whose powers are concentrated in a small number of irresponsible men. It may be that the growing weight and terror of rival armaments will generate, before this year passes, such secret willingness to peace as may make another world conference a practicable and hopeful thing, instead of a windy and mischievous futility. A gathering of this kind might seek, not solutions but a year's truce in arming and talking, while commissions examine the causes of conflict, explore avenues of adjustment, and prepare their reports for a reconvened conference. The more briefly such commissions sit, and the more continuously such commissions labor, the better it will be for the peace of mankind. Perhaps oratory should be added to the major causes of war.

Other proposals swarm into the imagination, but we may be sure that they involve more difficulties than are dreamt of by amiable philosophers. Many are tempted toward the idea of a federation of the English-speaking peoples of the world; here, perhaps, would be a force able to forge an international order, conscience, and peace. But, presumably, such a federation would evoke an equal and opposite federation; it would make government too powerful for the good of our public liberties; and, even if secure from without, it would not end strife within—war would merely become "civil." We do not want a crushing conformity of minds and wills to however admirable a Titan of American virtue and British order; variety and freedom are worth the price we pay for them, even the price of war.

In the end we must steel our hearts against utopias and be content, like Aristotle, with a slightly better state. We must not expect the world to im-

prove much faster than ourselves. Perhaps, if we can broaden our borders with intelligent study, modest travel, and honest thought, if we can become conscious of the natural hunger and needs of other peoples, and sensitive to the varied beauties of many cultures and diverse lands, we shall not so readily plunge into a competitive homicide, but shall find room in our hearts for a wider understanding and an almost universal sympathy. We, above all, who enjoy beyond our merits the grace of peace and unity conferred upon us by our encompassing seas, owe it as a debt of honor to see more generously the problems of nations divided by hostile frontiers, conflicting necessities, dissimilar languages, and unfamiliar ways. We shall find in all these people qualities and accomplishments from which we may learn and refresh ourselves, and by which we may enrich our inheritance and our posterity. Someday, let us hope, it will be permitted us to love our country without betraying mankind.

VICTORY WITHOUT PEACE¹

Archibald MacLeish

THE danger of historical parallels is their power to overwhelm the judgment with the pat and triumphant testimony of coincidence. Because an intellectual and moral crisis followed the end of the First World War and because we find ourselves in an intellectual and moral crisis now, some of us talk and act as though the two crises were the same. The generals who made their plans in 1939 to win the war of 1914, and the politicians who are preparing themselves in 1945 to keep from losing the peace of 1919, are no more victims of the revolving door of history than the teachers and the writers who, in the intellectual crisis of the 1940's, undertake to lead the world through the intellectual crisis of a generation past.

Actually the problems of the two times are different problems altogether. The crisis of 1918-19 was a crisis of hope—of hope turned to disappointment. Ours is a crisis of fear—of deliverance shaped as fear. The crisis of 1918-19 was a crisis in which men remembered that they had once talked of peace without victory. Ours is a crisis in which men discover that they are beginning to talk of victory without peace. The world, in the months immediately following the Armistice of 1918, breathed a deeper breath of hope than ever

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in its history before. What happened afterward was the disappointment of that hope. We, in the months immediately following the complete and crushing destruction of our enemies, feel only apprehension.

What is necessary is an understanding of the causes of that apprehension. Why, having won the greatest and most brilliant victory of human record, do we feel no sense of triumph? Why, having dictated to our enemies the terms of a most abject surrender, do we lack the sense of security? Why, having joined with the nations which want peace in a great and potentially powerful world organization for the maintenance of the peace, do we have so little sense of peace?

There are, of course, obvious answers to these questions. Or, rather, there is one answer which apparently seems obvious to those who care to make it. The answer is Russia. Or the answer is Russia plus the atomic rocket. In the opinion of certain of our fellow countrymen who think of themselves as realistic and fearless facers of the truth, the reason we feel insecure is Russia. The reason we have no sense of peace is Russia. The reason our victory had no triumph is Russia. We have won, in short, the wrong war, and there can be no peace until . . .

The rest of the sentence is left hanging in the air for hate and fear and bigotry to finish.

But the trouble with Russia as the answer to the crisis of our time is that it provides no answer. Russia may undoubtedly become a threat to our security and we to hers. If Russia continues to follow a policy, and if we continue to follow a policy, which between them will create a planet with two poles of power, each with its surrounding satellites and its offshore islands, then the likelihood undoubtedly is that these two poles of power will pull each other into war—and the certainty assuredly is that such a war would be the final and supreme disaster to the world.

But because Russia may become a threat to our security, as we to hers, it does not follow that Russia now is such a threat or ever need be. At the present moment, and for the practicable future, vital American interests conflict with vital Russian interests at no point on the earth's surface. And at the present moment, and for the practicable future, no nation wants war less than Russia, unless it be ourselves. To attribute the apprehensiveness and uncertainty and confusion of our time to the fact that Russia exists is like attributing the aches and pains of rheumatism to the Evil Eye. It is not Russia which creates the apprehensiveness. It is the apprehensiveness which makes of Russia the sinister and menacing figure we are shown so often in the propagandist press. It is because we are already insecure that a great power, half way around the earth, with a demonstrated desire to be left to

its own affairs, becomes a threat to our security. Fear concocts the objects of its fear in other lands than Nazi Germany.

The important question from the point of view of the intellectual and moral crisis of our time is not the question of Russia. It is the question of our confidence in peace. Why do we not believe in it? Why do we mistrust it? Is it because we believed in it once and were deceived? Is it because weapons now exist which can destroy it so easily and so disastrously—and with so little warning? Or is it some doctrine of historical fatality that troubles us? Do we feel, as some among us say they feel, that we are caught in one of those imbalances of time in which no equilibrium is possible—in which the world must inevitably swing from disaster to disaster, each more terrible and more destructive than the last, until the few remaining cinders are left, like the ashes of a ruined cellar hole in a bombed city, to produce the few coarse weeds which will become another life?

It is hard to believe in answers such as these, however earnestly they may be offered. One must think very little of the human race to believe that the deception of twenty-five years ago has so conditioned us that we are now incapable of confidence and hope. Even the laboratory animals of the psychologist have more stubbornness in their belief in life than that, and more resistance. Even the lost generations are not lost to shame.

As for the atomic bomb, there is nothing in that discovery, revolutionary and dramatic as it is, to change the fundamental character of the equation. Because you can kill more people more rapidly and with less warning with an atomic rocket than with a fleet of bombers, it does not follow that peace is more improbable, but only that war is not to be endured—which may indeed enlarge the probability of peace.

And the dialectic of inevitable disaster is in no better case. Hitler and his friends must be credited with one murder which the world will not regret. The wooden and metallic nineteenth-century god of history whose immutable social laws enforced themselves of themselves, and whose decrees came true by their own ineluctable logic, lies in a Nuremberg ditch with the rest of the rubble. The loud speakers of the Sportspalast proved to be louder than the proclamation of his laws, and the fatality of his economics proved to be far less fatal even than the pride of race.

The fanatical and ordered mobs which marched not only against the Czechs and Poles and Dutch and French and English but against themselves proved, if the proposition needed proof, that in a time of crisis men will act from passion—even the passions inspired by the bloodiest mythology and the most brutal lies—rather than on the mathematical self-interest either of

their kind or of their class or of themselves. To revert now to the defunct theory of an historical necessity, a mystical materialism, to explain the spiritual paralysis of our time is to confess our generation bankrupt. It is true undoubtedly that the weather of the spirit has changed throughout the world as it has changed before in human history so that the people feel it in their bones.

It is not true that the human spirit is the mere victim of these changes or that their causes are causes past our power to control or our responsibility as men to answer for.

But in any case there is no need to invoke academic deities or diabolical weapons or mass neuroses of the human mind. There is no need to go beyond the things we know ourselves. The ultimate diagnosis of the reasons why a great nation finds itself at the conclusion of a successful war in a kind of paralysis of confidence and will may be a matter for posterity to determine, but there are certain facts that even we can see. One is the familiar but sometimes forgotten fact that we fought the war in a division of mind as to the kind of world we expected to reach when the war was over. Another is the fact that neither of the contradictory worlds our divided mind expected has in fact been found.

Publicly, and in our official declarations, we fought the war for a new and better world. Privately, and in our domestic reassurances, we fought the war to return to the world we had.

And now that the war is over and we have won it we have neither world. Or rather we have just enough of each to spoil the other. The new world of the official declarations turns out to be no new world at all. And the old world with the hope of which we comforted ourselves in private, as Odysseus with the hope of Ithaca, is not the old world either. We have returned and there are the faces and the doorways and the streets—for there are still the doorways and the streets in many cities—but it is not Ithaca. It is not what we remembered when we thought of Ithaca.

When the last war ended, whatever the disappointment of our hope for something better, whatever our anxiety for the distant future, we had no doubt of the present substance and reality of the state of peace. The reality was there for any man to touch and feel and look at. You had only to go to live in Paris or London or Florence or even, for a time, Berlin to find yourself in a peace you could recognize as peace because you had lived in it before in peacetime.

With us, at this war's end, it is different. With us it is not easy to go back because, except for a time perhaps in our own country, there is no place left to go back to. There is only the way on. And the way on was not

what we meant when we told ourselves we were fighting to keep the world the same for the boys to find when the war was over.

This fundamental inconsistency in our two expectations—each disappointed: each disappointing the other—may not altogether explain the apprehension and frustration of this moment. But surely it suggests one fundamental difference between our time and the crisis which followed the last war.

What was at stake a quarter of a century ago was the capacity of American idealism to survive a major disillusionment. What is at stake now is the integrity of the American soul itself.

The contradiction between the public expression of our purpose to fight for the freedom of mankind, and the private expression of our intention to fight for the kind of world we had before, is not a contradiction which will lose its emasculating and destructive power because the war is over. If anything it will become more dangerous than it was.

For if those who propose to substitute for the old American dedication to the cause of freedom a new American dedication to the preservation of the thing they call, not very honestly, "the American way of life"—if those who propose to substitute for the self-evident truths of the American Declaration the self-evident interests of the American status quo—if those who propose this perversion of the American mind succeed, they will do two fatal things. They will destroy the generative force, the historical dynamic, of their country. And they will establish the United States as the negative and reactionary pole of world opinion and world politics.

Both would be disastrous not only to ourselves but to the world. For the most powerful nation of an age to oppose itself to the dominant aspiration of the age would mean that international suspicion and mistrust must inevitably increase. When international suspicion and mistrust increase in the world of the atomic bomb the consequence is war. And for any nation, powerful or not, to oppose itself to the aspirations of an age when those aspirations are its own past, its own tradition, its breath and blood and bone, is something even worse than war. It is the betrayal by a people of itself. The betrayal by a people of itself is the ultimate historical crime: the final and the most degrading suicide.

That is one alternative in the choice before us. The other is as generous as that is cowardly, as honest and decent as that is dishonest and lacking in decency. If we will be loyal to the declaration of principle which begot us—if we will refuse either to be frightened or seduced by those who put their faith in nostalgia for the past—if we will trust our own history and the

American Proposition, we will find ourselves on the crest of the true wave of the future, the wave that always was the future, however the dupes and the fainthearted may have mistaken it. For it is precisely our tradition as a people—it is precisely the American Proposition—which now has faith and credit in the world. The automatic gods are dead and men can inherit the earth again if they have the courage and the will. Ours is the great tradition of men, ours is the great hope, ours is the great affirmation.

These are the stakes at issue in the crisis of the time we live in. They involve the peace of the world, for there is no hope of peace on any other basis than the general freedom of the people. They involve the integrity and the survival of this nation, for this nation has no meaning and no reason to exist except the meaning and the reason of the people. Unless we are now prepared to accept, not for ourselves alone but for the world, and not for belief alone but for action, the literal and universal truth of the principles that all men are born equal; that they are endowed by their creator with certain unalienable rights; that among them are life, liberty, and the pursuit of happiness—unless we are prepared to accept these truths, we will lose not only the hope of peace which now is darkened, but ourselves as well. To stand on one side or the other of that choice is the hard and inescapable lot of every one of us.

To stand on the people's side, which was in the beginning and has always been and always must be the American side, is the right of those who have the courage and the will to choose.

Art of Living

OF LOVE • FRANCIS BACON

OF MARRIAGE AND SINGLE LIFE • FRANCIS BACON

THE BEAU'S HEAD • JOSEPH ADDISON

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OF LOVE¹

Francis Bacon

THE stage is more beholding to Love, than the life of man. For as to the stage, love is ever matter of comedies, and now and then of tragedies; but in life it doth much mischief, sometimes like a syren, sometimes like a fury. You may observe, that amongst all the great and worthy persons (whereof the memory remaineth, either ancient or recent), there is not one that hath been transported to the mad degree of love: which shews that great spirits and great business do keep out this weak passion. You must except nevertheless Marcus Antonius, the half partner of the empire of Rome, and Appius Claudius, the decemvir and lawgiver; whereof the former was indeed a voluptuous man, and inordinate; but the latter was an austere and wise man: and therefore it seems (though rarely) that love can find entrance not only into an open heart, but also into a heart well fortified, if watch be not well kept. It is a poor saying of Epicurus, *Satis magnum alter alteri theatrum sumus*²; as if man, made for the contemplation of heaven and all noble objects, should do nothing but kneel before a little idol, and make himself a subject, though not of the mouth (as beasts are), yet of the eye; which was given him for higher purposes. It is a strange thing to note the excess of this passion, and how it braves³ the nature and value of things, by this; that the speaking in a perpetual hyperbole is comely in nothing but in love. Neither is it merely in the phrase; for whereas it hath been well said that the arch-flatterer, with whom all the petty flatterers have intelligence, is a man's self; certainly the lover is more. For there was never proud man thought so absurdly well of himself as the lover doth of the person loved; and therefore it was well said, *That it is impossible to love and to be wise*. Neither doth this weakness appear to others only, and not to the party loved; but to the loved most of all, except the love be reciproque. For it is a true rule, that love is ever rewarded either with the reciproque or with an inward and secret contempt. By how much the more men ought to beware of this passion, which loseth not only other things, but itself. As for the other losses, the poet's relation doth well figure them; That he that preferred Helena, quitted the gifts of Juno and Pallas. For whosoever esteemeth too much of amorous affection quitteth both riches and wisdom. This passion hath his floods in the very times of weakness; which are great prosperity and great adversity; though this latter hath been less observed; both which times kindle love, and make it more fervent, and therefore shew it to be the child of folly. They do best, who if they cannot but admit love, yet make it keep quarter; and sever it wholly from their serious

¹This essay and the one following are from Francis Bacon's *Essays* (1612).

²To one another we are a spectacle great enough.

³Exaggerates.

affairs and actions of life; for if it check⁴ once with business, it troubleth men's fortunes, and maketh men that they can no ways be true to their own ends. I know not how, but martial men are given to love: I think it is but as they are given to wine; for perils commonly ask to be paid in pleasures. There is in man's nature a secret inclination and motion towards love of others, which if it be not spent upon some one or a few, doth naturally spread itself towards many, and maketh men become humane and charitable; as it is seen sometime in friars. Nuptial love maketh mankind; friendly love perfecteth it; but wanton love corrupteth and embaseth it.

OF MARRIAGE AND SINGLE LIFE

Francis Bacon

HE THAT hath wife and children hath given hostages to fortune; for they are impediments to great enterprises, either of virtue or mischief. Certainly the best work, and of greatest merit for the public, have proceeded from the unmarried or childless men; which both in affection and means have married and endowed the public. Yet it were great reason that those that have children should have greatest care of future times; unto which they know they must transmit their dearest pledges. Some there are, who though they lead a single life, yet their thoughts do end with themselves, and account future times impertinences. Nay, there are some other that account wife and children but as bills of charges. Nay more, there are some foolish rich covetous men, that take a pride in having no children, because they may be thought so much the richer. For perhaps they have heard some talk, *Such an one is a great rich man*, and another except to it, *Yea, but he hath a great charge of children*; as if it were an abatement to his riches. But the most ordinary cause of a single life is liberty, especially in certain self-pleasing and humorous¹ minds, which are so sensible of every restraint, as they will go near to think their girdles and garters to be bonds and shackles. Unmarried men are best friends, best masters, best servants; but not always best subjects; for they are like to run away; and almost all fugitives are of that condition. A single life doth well with churchmen; for charity will hardly water the ground where it must first fill a pool. It is indifferent for judges and magistrates; for if they be facile and corrupt, you shall have a servant five times worse than a wife. For soldiers, I find the generals commonly in their hortatives² put men in mind of their wives and children; and I think the despising of marriage amongst the Turks maketh the vulgar soldier more base. Certainly wife and

⁴Interfere.

¹Whimsical.

²Exhortations.

children are a kind of discipline of humanity; and single men, though they may be many times more charitable, because their means are less exhaust, yet, on the other side, they are more cruel and hardhearted, (good to make severe inquisitors,) because their tenderness is not so oft called upon. Grave natures, led by custom, and therefore constant, are commonly loving husbands; as was said of Ulysses, *vetulam suam proetulit immortalitati*.³ Chaste women are often proud and froward, as presuming upon the merit of their chastity. It is one of the best bonds both of chastity and obedience in the wife, if she think her husband wise; which she will never do if she find him jealous. Wives are young men's mistresses; companions for middle age; and old men's nurses. So as a man may have a quarrel,⁴ to marry when he will. But yet he was reputed one of the wise men, that made answer to the question when a man should marry?—*A young man not yet, an elder man not at all*. It is often seen that bad husbands have very good wives; whether it be that it raiseth the price of their husband's kindness when it comes; or that the wives take a pride in their patience. But this never fails, if the bad husbands were of their own choosing, against their friends' consent; for then they will be sure to make good their own folly.

THE BEAU'S HEAD¹*Joseph Addison*—tribus Anticyris caput insanabile.²—JUVENAL

I WAS yesterday engaged in an assembly of virtuosos, where one of them produced many curious observations, which he had lately made in the anatomy of an human body. Another of the company communicated to us several wonderful discoveries, which he had also made on the same subject, by the help of very fine glasses. This gave birth to a great variety of uncommon remarks, and furnished discourse for the remaining part of the day.

The different opinions which were started on this occasion presented to my imagination so many new ideas that, by mixing with those which were already there, they employed my fancy all the last night, and composed a very wild extravagant dream.

I was invited, methought, to the dissection of a beau's head, and of a coquette's heart, which were both of them laid on a table before us. An

³He preferred his aged wife to immortality.⁴Excuse.¹This essay and the one following by Addison are from *The Spectator* (1711–1712).²"Their heads, which three Anticyras cannot heal."—Translated by Ben Jonson.

imaginary operator opened the first with a great deal of nicety, which upon a cursory and superficial view, appeared like the head of another man; but, upon applying our glasses to it, we made a very odd discovery, namely, that what we looked upon as brains, were not such in reality, but an heap of strange materials wound up in the shape and texture, and packed together with wonderful art in the several cavities of the skull. For, as Homer tells us that the blood of the gods is not real blood, but only something like it; so we found that the brain of a beau is not real brain but only something like it.

The pineal gland, which many of our modern philosophers suppose to be the seat of the soul, smelt very strong of essence and orange-flower water, and was encompassed with a kind of horny substance, cut into a thousand little faces or mirrors, which were imperceptible to the naked eye; insomuch that the soul, if there had been any here, must have been always taken up in contemplating her own beauties.

We observed a large antrum or cavity in the sinciput, that was filled with ribbons, lace, and embroidery, wrought together in a most curious piece of network, the parts of which were likewise imperceptible to the naked eye. Another of these antrums or cavities was stuffed with invisible billets-doux, love-letters, pricked dances, and other trumpery of the same nature. In another we found a kind of powder, which set the whole company a sneezing, and by the scent discovered itself to be right Spanish. The several other cells were stored with commodities of the same kind, of which it would be tedious to give the reader an exact inventory.

There was a large cavity on each side of the head, which I must not omit. That on the right side was filled with fictions, flatteries, and falsehoods, vows, promises, and protestations; that on the left with oaths and imprecations. There issued out a duct from each of these cells, which ran into the root of the tongue, where both joined together, and passed forward in one common duct to the tip of it. We discovered several little roads or canals running from the ear into the brain, and took particular care to trace them out through their several passages. One of them extended itself to a bundle of sonnets and little musical instruments. Others ended in several bladders which were filled either with wind or froth. But the large canal entered into a great cavity of the skull, from whence there went another canal into the tongue. This great cavity was filled with a kind of spongy substance, which the French anatomists call *galimatias*,^s and the English nonsense.

The skins of the forehead were extremely tough and thick, and, what very much surprised us, had not in them any single blood-vessel that we were able to discover, either with or without our glasses; from whence we con-

- ^sGibberish.

cluded that the party when alive must have been entirely deprived of the faculty of blushing.

The os cribriforme⁴ was exceedingly stuffed, and in some places damaged with snuff. We could not but take notice in particular of that small muscle which is not often discovered in dissections, and draws the nose upwards, when it expresses the contempt which the owner of it has, upon seeing anything he does not like, or hearing anything he does not understand. I need not tell my learned reader, this is that muscle which performs the motion so often mentioned by the Latin poets, when they talk of a man's cocking his nose, or playing the rhinoceros.

We did not find anything very remarkable in the eye, saving only that the *musculi amatori*, or as we may translate it into English, the ogling muscles, were very much worn and decayed with use; whereas on the contrary, the elevator or the muscle which turns the eye toward heaven did not appear to have been used at all.

I have only mentioned in this dissection such new discoveries as we were able to make, and have not taken any notice of those parts which are to be met with in common heads. As for the skull, the face, and indeed the whole outward shape and figure of the head, we could not discover any difference from what we observe in the heads of other men. We were informed that the person to whom this head belonged, had passed for a man above five and thirty years: during which time he eat and drank like other people, dressed well, talked loud, laughed frequently, and on particular occasions had acquitted himself tolerably at a ball or an assembly, to which one of the company added that a certain knot of ladies took him for a wit. He was cut off in the flower of his age, by the blow of a paving shovel, having been surprised by an eminent citizen, as he was tendering some civilities to his wife.

When we had thoroughly examined this head with all its apartments, and its several kinds of furniture, we put up the brain, such as it was, into its proper place, and laid it aside under a broad piece of scarlet cloth, in order to be prepared, and kept in a great repository of dissections, our operator telling us that the preparation would not be so difficult as that of another brain, for that he had observed several of the little pipes and tubes which ran through the brain were already filled with a kind of mercurial substance, which he looked upon to be true quicksilver.

He applied himself in the next place to the coquette's heart, which he likewise laid open with great dexterity. There occurred to us many particularities in this dissection; but, being unwilling to burden my reader's memory too much, I shall reserve this subject for the speculation of another day.

⁴Driveling mouth.

THE COQUETTE'S HEART

Joseph Addison

*Pectoribus inhians spirantia consulit exta.*¹

VIRGIL

HAVING already given an account of the dissection of a beau's head, with the several discoveries made on that occasion, I shall here, according to my promise, enter upon the dissection of a coquette's heart, and communicate to the public such particularities as we observed in that curious piece of anatomy.

I should perhaps have waived this undertaking, had not I been put in mind of my promise by several of my unknown correspondents, who are very importunate with me to make an example of the coquette, as I have already done of the beau. It is, therefore, in compliance with the request of friends that I have looked over the minutes of my former dream, in order to give the public an exact relation of it, which I shall enter upon without further preface. . . .

Our operator, before he engaged in this visionary dissection, told us that there was nothing in his art more difficult than to lay open the heart of a coquette, by reason of the many labyrinths and recesses which are to be found in it, and which do not appear in the heart of any other animal.

He desired us first of all to observe the pericardium, or outward case of the heart, which we did very attentively; and by the help of our glasses discerned in it millions of little scars, which seemed to have been occasioned by the points of innumerable darts and arrows, that from time to time had glanced upon the outward coat; though we could not discover the smallest orifice by which any of them had entered and pierced the inward substance.

Every smatterer in anatomy knows that this pericardium, or case of the heart, contains in it a thin reddish liquor, supposed to be bred from the vapors which exhale out of the heart, and being stopped here, are condensed into this watery substance. Upon examining this liquor, we found that it had in it all the qualities of that spirit which is made use of in the thermometer to show the change of weather.

Nor must I here omit an experiment one of the company assured us he himself had made with this liquor, which he found in great quantity about the heart of a coquette whom he had formerly dissected. He affirmed to us that he had actually enclosed it in a small tube made after the manner of a

¹"And gazing greedily on thé . . . breasts, consults the entrails, yet quivering with life."—John Conington.

weatherglass; but that, instead of acquainting him with the variations of the atmosphere, it showed him the qualities of those persons who entered the room where it stood. He affirmed also that it rose at the approach of a plume of feathers, an embroidered coat, or a pair of fringed gloves; and that it fell as soon as an illshaped periwig, a clumsy pair of shoes, or an unfashionable coat came into his house: Nay, he proceeded so far as to assure us that upon his laughing aloud, when he stood by it, the liquor mounted very sensibly, and immediately sunk again upon his looking serious. In short, he told us that he knew very well by this invention whenever he had a man of sense or a coxcomb in his room.

Having cleared away the pericardium, or the case and liquor above mentioned, we came to the heart itself. The outward surface of it was extremely slippery, and the mucro, or point, so very cold withal that, upon endeavoring to take hold of it, it glided through the fingers like a smooth piece of ice.

The fibers were turned and twisted in a more intricate and perplexed manner than they are usually found in other hearts; insomuch, that the whole heart was wound up together like a Gordian knot, and must have had very irregular and unequal motions, whilst it was employed in its vital function.

One thing we thought very observable, namely, that upon examining all the vessels which came into it or issued out of it, we could not discover any communication that it had with the tongue.

We could not but take notice, likewise, that several of those little nerves in the heart which are affected by the sentiments of love, hatred, and other passions, did not descend to this before us from the brain, but from the muscles which lie about the eye.

Upon weighing the heart in my hand, I found it to be extremely light, and consequently very hollow; which I did not wonder at when, upon looking into the inside of it, I saw multitudes of cells and cavities running one within another, as our historians describe the apartments of Rosamond's Bower.² Several of these little hollows were stuffed with innumerable sorts of trifles, which I shall forbear giving any particular account of, and shall therefore only take notice of what lay first and uppermost, which upon our unfolding it and applying our microscope to it appeared to be a flame-colored hood.

We were informed that the lady of this heart, when living, received the addresses of several who made love to her, and did not only give each of them encouragement, but made everyone she conversed with believe that she regarded him with an eye of kindness; for which reason we expected to have seen the impression of multitudes of faces among the several plates and foldings of the heart, but to our great surprise not a single print of this nature

²Bower where Henry II is supposed to have sheltered Rosamond Clifford.

discovered itself till we came into the very core and center of it. We there observed a little figure, which, upon applying our glasses to it, appeared dressed in a very fantastic manner. The more I looked upon it, the more I thought I had seen the face before, but could not possibly recollect either the place or time; when at length one of the company, who had examined this figure more nicely than the rest, showed us plainly by the make of its face, and the several turns of its features, that the little idol that was thus lodged in the middle of the heart was the deceased beau, whose head I gave some account of in my last Tuesday's paper.

As soon as we had finished our dissection, we resolved to make an experiment of the heart, not being able to determine among ourselves the nature of its substance, which differed in so many particulars from that of the heart in other females. Accordingly we laid it into a pan of burning coals, when we observed in it a certain salamandrine quality, that made it capable of living in the midst of fire and flame, without being consumed, or so much as singed.

As we were admiring this strange phenomenon, and standing round the heart in a circle, it gave a most prodigious sigh, or rather crack, and dispersed all at once in smoke and vapor. This imaginary noise, which methought was louder than the burst of a cannon, produced such a violent shake in my brain, that it dissipated the fumes of sleep, and left me in an instant broad awake.

PORTRAIT OF A GENTLEMAN¹

John Henry Newman

HENCE it is that it is almost a definition of a gentleman to say he is one who never inflicts pain. This description is both refined and, as far as it goes, accurate. He is mainly occupied in merely removing the obstacles which hinder the free and unembarrassed action of those about him; and he concurs with their movements rather than takes the initiative himself. His benefits may be considered as parallel to what are called comforts or conveniences in arrangements of a personal nature; like an easy chair or a good fire, which do their part in dispelling cold and fatigue, though nature provides both means of rest and animal heat without them. The true gentleman in like manner carefully avoids whatever may cause a jar or a jolt in the minds of those with whom he is cast;—all clashing of opinion, or collision of feeling, all restraint, or suspicion, or gloom, or resentment; his great concern being to

¹From *Idea of a University* by John Henry Newman (1852).

make every one at their ease and at home. He has his eyes on all his company; he is tender towards the bashful, gentle towards the distant, and merciful towards the absurd; he can recollect to whom he is speaking; he guards against unseasonable allusions, or topics which may irritate; he is seldom prominent in conversation, and never wearisome. He makes light of favours while he does them, and seems to be receiving when he is conferring. He never speaks of himself except when compelled, never defends himself by a mere retort, he has no ears for slander or gossip, is scrupulous in imputing motives to those who interfere with him, and interprets everything for the best. He is never mean or little in his disputes, never takes unfair advantage, never mistakes personalities or sharp sayings for arguments, or insinuates evil which he dare not say out. From a long-sighted prudence, he observes the maxim of the ancient sage, that we should ever conduct ourselves towards our enemy as if he were one day to be our friend. He has too much good sense to be affronted at insults, he is too well employed to remember injuries, and too indolent to bear malice. He is patient, forbearing, and resigned, on philosophical principles; he submits to pain, because it is inevitable, to bereavement, because it is irreparable, and to death, because it is his destiny. If he engages in controversy of any kind, his disciplined intellect preserves him from the blundering discourtesy of better, perhaps, but less educated minds; who like blunt weapons, tear and hack instead of cutting clean, who mistake the point in argument, waste their strength on trifles, misconceive their adversary, and leave the question more involved than they find it. He may be right or wrong in his opinion, but he is too clear-headed to be unjust; he is as simple as he is forcible, and as brief as he is decisive. Nowhere shall we find greater candour, consideration, indulgence; he throws himself into the minds of his opponents, he accounts for their mistakes. He knows the weakness of human reason as well as its strength, its province and its limits. If he be an unbeliever, he will be too profound and large-minded to ridicule religion or to act against it; he is too wise to be a dogmatist or fanatic in his infidelity. He respects piety and devotion; he even supports institutions as venerable, beautiful, or useful, to which he does not assent; he honours the ministers of religion, and it contents him to decline its mysteries without assailing or denouncing them. He is a friend of religious toleration, and that, not only because his philosophy has taught him to look on all forms of faith with an impartial eye, but also from the gentleness and effeminacy of feeling, which is the attendant on civilization.

Not that he may not hold a religion too, in his own way, even when he is not a Christian. In that case his religion is one of imagination and sentiment; it is the embodiment of those ideas of the sublime, majestic, and beautiful, without which there can be no large philosophy. Sometimes he acknowledges

the being of God, sometimes he invests an unknown principle or quality with the attributes of perfection. And this deduction of his reason, or creation of his fancy, he makes the occasion of such excellent thoughts, and the starting-point of so varied and systematic a teaching, that he even seems like a disciple of Christianity itself. From the very accuracy and steadiness of his logical powers, he is able to see what sentiments are consistent in those who hold any religious doctrine at all, and he appears to others to feel and to hold a whole circle of theological truths, which exist in his mind no otherwise than as a number of deductions.

Such are some of the lineaments of the ethical character, which the cultivated intellect will form, apart from religious principle. They are seen within the pale of the Church and without it, in holy men, and in profligate; they form the *beau-ideal* of the world; they partly assist and partly distort the development of the Catholic. They may subserve the education of a St. Francis de Sales or a Cardinal Pole; they may be the limits of the contemplation of a Shaftesbury or a Gibbon. Basil and Julian were fellow-students at the schools of Athens; and one became the Saint and Doctor of the Church, the other her scoffing and relentless foe.

ON MARRIAGE¹

Robert Louis Stevenson

WITH the single exception of Falstaff, all Shakespeare's characters are what we call marrying men. Mercutio, as he was own cousin to Benedick and Biron, would have come to the same end in the long run. Even Iago had a wife, and, what is far stranger, he was jealous. People like Jaques and the Fool in *Lear*, although we can hardly imagine they would ever marry, kept single out of a cynical humor or for a broken heart, and not, as we do nowadays, from a spirit of incredulity and preference for the single state. For that matter, if you turn to George Sand's French version of *As You Like It* (and I think I can promise you will like it but little), you will find Jaques marries Celia just as Orlando marries Rosalind.

At least there seems to have been much less hesitation over marriage in Shakespeare's days; and what hesitation there was was of a laughing sort, and not much more serious, one way or the other, than that of Panurge. In modern comedies the heroes are mostly of Benedick's way of thinking, but twice as much in earnest, and not one-quarter so confident. And I take this diffidence as a proof of how sincere their terror is. They know they are only human after all; they know what gins and pitfalls lie about their feet; and how the shadow of matrimony waits, resolute and awful, at the cross-roads. They would wish to keep their liberty; but if that may not be, why, God's will be done! "What, are you afraid of marriage?" asks Cécile, in *Maitre Guerin*. "Oh, mon Dieu, non!" replies Arthur; "I should take chloroform." They look forward to marriage much in the same way as they prepare themselves for death: each seems inevitable; each is a great Perhaps, and a leap into the dark, for which, when a man is in the blue devils, he has specially to harden his heart. That splendid scoundrel, Maxime de Trailles, took the news of marriages much as an old man hears the deaths of his contemporaries. "C'est désespérant," he cried, throwing himself down in the arm-chair at Madame Schontz's; "c'est désespérant, nous nous marions tous!" Every marriage was like another gray hair on his head; and the jolly church bells seemed to taunt him with his fifty years and fair round belly.

The fact is, we are much more afraid of life than our ancestors, and cannot find it in our hearts either to marry or not to marry. Marriage is terrifying; but so is a cold and forlorn old age. The friendships of men are vastly agreeable, but they are insecure. You know all the time that one friend will marry and put you to the door; a second accept a situation in China, and become

¹From *Virginibus Puerisque*, by Robert Louis Stevenson (1881). Charles Scribner's Sons.

no more to you than a name, a reminiscence, and an occasional crossed letter, very laborious to read; a third will take up with some religious crotchet and treat you to sour looks thenceforward. So, in one way or another, life forces men apart and breaks up the goodly fellowships forever. The very flexibility and ease which make men's friendships so agreeable while they endure, make them the easier to destroy and forget. And a man who has a few friends, or one who has a dozen (if there be any one so wealthy on this earth), cannot forget on how precarious a base his happiness reposes; and how by a stroke or two of fate—a death, a few light words, a piece of stamped paper, a woman's bright eyes—he may be left, in a month, destitute of all. Marriage is certainly a perilous remedy. Instead of on two or three, you stake your happiness on one life only. But still, as the bargain is more explicit and complete on your part, it is more so on the other; and you have not to fear so many contingencies; it is not every wind that can blow you from your anchorage; and so long as Death withholds his sickle, you will always have a friend at home. People who share a cell in the Bastille, or are thrown together on an uninhabited island, if they do not immediately fall to fisticuffs, will find some possible ground of compromise. They will learn each other's ways and humors, so as to know where they must go warily, and where they may lean their whole weight. The discretion of the first years becomes the settled habit of the last; and so, with wisdom and patience, two lives may grow indissolubly into one.

But marriage, if comfortable, is not at all heroic. It certainly narrows and damps the spirits of generous men. In marriage, a man becomes slack and selfish, and undergoes a fatty degeneration of his moral being. It is not only when Lydgate misallies himself with Rosamond Vincy, but when Ladislaw marries above him with Dorothea, that this may be exemplified. The air of the fireside withers out all the fine wildings of the husband's heart. He is so comfortable and happy that he begins to prefer comfort and happiness to everything else on earth, his wife included. Yesterday he would have shared his last shilling; to-day "his first duty is to his family," and is fulfilled in large measure by laying down vintages and husbanding the health of an invaluable parent. Twenty years ago this man was equally capable of crime or heroism; now he is fit for neither. His soul is asleep, and you may speak without constraint; you will not wake him. It is not for nothing that Don Quixote was a bachelor and Marcus Aurelius married ill. For women, there is less of this danger. Marriage is of so much use to a woman, opens out to her so much more of life, and puts her in the way of so much more freedom and usefulness, that, whether she marry ill or well, she can hardly miss some benefit. It is true, however, that some of the merriest and most genuine of women are old

maids; and that those old maids, and wives who are unhappily married, have, often most of the true motherly touch. And this would seem to show, even for women, some narrowing influence in comfortable married life. But the rule is none the less certain: if you wish the pick of men and women, take a good bachelor and a good wife.

I am often filled with wonder that so many marriages are passably successful, and so few come to open failure, the more so as I fail to understand the principle on which people regulate their choice. I see women marrying indiscriminately with staring burgesses and ferret-faced, white-eyed boys, and men dwelling in contentment with noisy scullions, or taking into their lives acidulous vestals. It is a common answer to say the good people marry because they fall in love; and of course you may use and misuse a word as much as you please, if you have the world along with you. But love is at least a somewhat hyperbolical expression for such lukewarm preference. It is not here, anyway, that Love employs his golden shafts; he cannot be said, with any fitness of language, to reign here and revel. Indeed, if this be love at all, it is plain the poets have been fooling with mankind since the foundation of the world. And you have only to look these happy couples in the face, to see they have never been in love, or in hate, or in any other high passion, all their days. When you see a dish of fruit at dessert, you sometimes set your affections upon one particular peach or nectarine, watch it with some anxiety as it comes round the table, and feel quite a sensible disappointment when it is taken by some one else. I have used the phrase "high passion." Well, I should say this was about as high a passion as generally leads to marriage. One husband hears after marriage that some poor fellow is dying of his wife's love. "What a pity!" he exclaims; "you know I could so easily have got another!" And yet that is a very happy union. Or again: A young man was telling me the sweet story of his loves. "I like it well enough as long as her sisters are there," said this amorous swain; "but I don't know what to do when we're alone." Once more: A married lady was debating the subject with another lady. "You know, dear," said the first, "after ten years of marriage, if he is nothing else, your husband is always an old friend." "I have many old friends," returned the other, "but I prefer them to be nothing more." "Oh, perhaps I might *prefer* that also!" There is a common note in these three illustrations of the modern idyll; and it must be owned the god goes among us with a limping gait and blear eyes. You wonder whether it was so always; whether desire was always equally dull and spiritless, and possession equally cold. I cannot help fancying most people make, ere they marry, some such table of recommendations as Hannah Godwin wrote to her brother William anent her friend, Miss Gay. It is so charmingly comical, and so pat to the occasion,

that I must quote a few phrases. "The young lady is in every sense formed to make one of your disposition really happy. She has a pleasing voice, with which she accompanies her musical instrument with judgment. She has an easy politeness in her manners, neither free nor reserved. She is a good house-keeper and a good economist, and yet of a generous disposition. As to her internal accomplishments, I have reason to speak still more highly of them: good sense without vanity, a penetrating judgment without a disposition to satire, with about as much religion as my William likes, struck me with a wish that she was my William's wife." That is about the tune: pleasing voice, moderate good looks, unimpeachable internal accomplishments after the style of the copy-book, with about as much religion as my William likes; and then, with all speed, to church.

To deal plainly, if they only married when they fell in love, most people would die unwed; and among the others, there would be not a few tumultuous households. The Lion is the King of Beasts, but he is scarcely suitable for a domestic pet. In the same way, I suspect love is rather too violent a passion to make, in all cases, a good domestic sentiment. Like other violent excitements, it throws up not only what is best, but what is worst and smallest, in men's characters. Just as some people are malicious in drink, or brawling and virulent under the influence of religious feeling, some are moody, jealous, and exacting when they are in love, who are honest, downright, good-hearted fellows enough in the everyday affairs and humors of the world.

How then, seeing we are driven to the hypothesis that people choose in comparatively cold blood, how is it they choose so well? One is almost tempted to hint that it does not much matter whom you marry; that, in fact, marriage is a subjective affection, and if you have made up your mind to it, and once talked yourself fairly over, you could "pull it through" with anybody. But even if we take matrimony at its lowest, even if we regard it as no more than a sort of friendship recognized by the police, there must be degrees in the freedom and sympathy realized, and some principle to guide simple folk in their selection. Now what should this principle be? Are there no more definite rules than are to be found in the Prayer-book? Law and religion forbid the bans on the grounds of propinquity or consanguinity; society steps in to separate classes; and in all this most critical matter, has common-sense, has wisdom, never a word to say? In the absence of more magisterial teaching, let us talk it over between friends: even a few guesses may be of interest to youths and maidens.

In all that concerns eating and drinking, company, climate, and ways of life, community of taste is to be sought for. It would be trying, for instance, to keep bed and board with an early riser or a vegetarian. In matters of art

and intellect, I believe it is of no consequence. Certainly it is of none in the companionships of men, who will dine more readily with one who has a good heart, a good cellar, and a humorous tongue, than with another who shares all their favorite hobbies and is melancholy withal. If your wife likes Tupper, that is no reason why you should hang your head. She thinks with the majority, and has the courage of her opinions. I have always suspected public taste to be a mongrel product out of affectation by dogmatism; and felt sure, if you could only find an honest man of no special literary bent, he would tell you he thought much of Shakespeare bombastic and most absurd, and all of him written in very obscure English and wearisome to read. And not long ago I was able to lay by my lantern in content, for I found the honest man. He was a fellow of parts, quick, humorous, a clever painter, and with an eye for certain poetical effects of sea and ships. I am not much of a judge of that kind of thing, but a sketch of his comes before me sometimes at night. How strong, supple, and living the ship seems upon the billows! With what a dip and rake she shears the flying sea! I cannot fancy the man who saw this effect, and took it on the wing with so much force and spirit, was what you call commonplace in the last recesses of the heart. And yet he thought, and was not ashamed to have it known of him, that Ouida was better in every way than William Shakespeare. If there were more people of his honesty, this would be about the staple of lay criticism. It is not taste that is plentiful, but courage that is rare. And what have we in place? How many, who think no otherwise than the young painter, have we not heard disbursing second-hand hyperboles? Have you never turned sick at heart, O best of critics! when some of your own sweet adjectives were returned on you before a gaping audience? Enthusiasm about art is become a function of the average female being, which she performs with precision and a sort of haunting sprightliness, like an ingenious and well-regulated machine. Sometimes, alas! the calmest man is carried away in the torrent, bandies adjectives with the best, and out-Herods Herod for some shameful moments. When you remember that, you will be tempted to put things strongly, and say you will marry no one who is not like George the Second, and cannot state openly a distaste for poetry and painting.

The word "facts" is, in some ways, crucial. I have spoken with Jesuits and Plymouth Brethren, mathematicians and poets, dogmatic republicans and dear old gentlemen in bird's-eye neckcloths; and each understood the word "facts" in an occult sense of his own. Try as I might, I could get no nearer the principle of their division. What was essential to them, seemed to me trivial or untrue. We could come to no compromise as to what was, or what was not, important in the life of man. Turn as we pleased, we all stood back to back in a big ring, and saw another quarter of the heavens, with different

mountain-tops along the sky-line and different constellations overhead. We had each of us some whimsy in the brain, which we believed more than anything else, and which discolored all experience to its own shade. How would you have people agree, when one is deaf and the other blind? Now this is where there should be community between man and wife. They should be agreed on their catchword in "*facts of religion*," or "*facts of science*," or "*society, my dear*"; for without such an agreement all intercourse is a painful strain upon the mind. "About as much religion as my William likes," in short, that is what is necessary to make a happy couple of any William and his spouse. For there are differences which no habit nor affection can reconcile, and the Bohemian must not intermarry with the Pharisee. Imagine Consuelo as Mrs. Samuel Budgett, the wife of the successful merchant! The best of men and the best of women may sometimes live together all their lives, and, for want of some consent on fundamental questions, hold each other lost spirits to the end.

A certain sort of talent is almost indispensable for people who would spend years together and not bore themselves to death. But the talent, like the agreement, must be for and about life. To dwell happily together, they should be versed in the niceties of the heart, and born with a faculty for willing compromise. The woman must be talented as a woman, and it will not much matter although she is talented in nothing else. She must know her *métier de femme*, and have a fine touch for the affections. And it is more important that a person should be a good gossip, and talk pleasantly and smartly of common friends and the thousand and one nothings of the day and hour, than that she should speak with the tongues of men and angels; for awhile together by the fire, happens more frequently in marriage than the presence of a distinguished foreigner to dinner. That people should laugh over the same sort of jests, and have many a story of "grouse in the gun-room," many an old joke between them which time cannot wither nor custom stale, is a better preparation for life, by your leave, than many other things higher and better sounding in the world's ears. You could read Kant by yourself, if you wanted; but you must share a joke with some one else. You can forgive people who do not follow you through a philosophical disquisition; but to find your wife laughing when you had tears in your eyes, or staring when you were in a fit of laughter, would go some way toward a dissolution of the marriage.

I know a woman who, from some distaste or disability, could never so much as understand the meaning of the word *politics*, and has given up trying to distinguish Whigs from Tories; but take her on her own politics, ask her about other men or women and the chicanery of everyday existence—the rubs, the tricks, the vanities on which life turns—and you will not find many more shrewd, trenchant, and humorous. Nay, to make plainer what I have in mind,

this same woman has a share of the higher and more poetical understanding, frank interest in things for their own sake, and enduring astonishment at the most common. She is not to be deceived by custom, or made to think a mystery solved when it is repeated. I have heard her say she could wonder herself crazy over the human eyebrow. Now in a world where most of us walk very contentedly in the little lit circle of their own reason, and have to be reminded of what lies without by specious and clamant exceptions—earthquakes, eruptions of Vesuvius, banjos floating in mid-air at a *séance*, and the like—a mind so fresh and unsophisticated is no despicable gift. I will own I think it a better sort of mind than goes necessarily with the clearest views on public business. It will wash. It will find something to say at an odd moment. It has in it the spring of pleasant and quaint fancies. Whereas I can imagine myself yawning all night long until my jaws ached and the tears came into my eyes, although my companion on the other side of the hearth held the most enlightened opinions on the franchise or the ballot.

The question of professions, in as far as they regard marriage, was only interesting to women until of late days, but it touches all of us now. Certainly, if I could help it, I would never marry a wife who wrote. The practice of letters is miserably harassing to the mind; and after an hour or two's work, all the more human portion of the author is extinct; he will bully, backbite, and speak daggers. Music, I hear, is not much better. But painting, on the contrary, is often highly sedative; because so much of the labor, after your picture is once begun, is almost entirely manual, and of that skilled sort of manual labor which offers a continual series of successes, and so tickles a man, through his vanity, into good-humor. Alas! in letters there is nothing of this sort. You may write as beautiful a hand as you will, you have always something else to think of, and cannot pause to notice your loops and flourishes; they are beside the mark, and the first law stationer could put you to the blush. Rousseau, indeed, made some account of penmanship, even made it a source of livelihood, when he copied out the *Héloïse* for *dilettante* ladies; and therein showed that strange eccentric prudence which guided him among so many thousand follies and insanities. It would be well for all of the *genus irritabile* thus to add something of skilled labor to intangible brain-work. To find the right word is so doubtful a success and lies so near to failure, that there is no satisfaction in a year of it; but we all know when we have formed a letter perfectly; and a stupid artist, right or wrong, is almost equally certain he has found a right tone or a right color, or made a dexterous stroke with his brush. And, again, painters may work out of doors; and the fresh air, the deliberate seasons, and the "tranquillizing influence" of the green earth, counterbalance the fever of thought, and keep them cool, placable, and prosaic.

A ship captain is a good man to marry if it is a marriage of love, for absences are a good influence in love and keep it bright and delicate; but he is just the worst man if the feeling is more pedestrian, as habit is too frequently torn open and the soldier has never time to set. Men who fish, botanize, work with the turning-lathe, or gather sea-weeds, will make admirable husbands; and a little amateur painting in water-color shows the innocent and quiet mind. Those who have a few intimates are to be avoided; while those who swim loose, who have their hat in their hand all along the street, who can number an infinity of acquaintances and are not chargeable with any one friend, promise an easy disposition and no rival to the wife's influence. I will not say they are the best of men, but they are the stuff out of which adroit and capable women manufacture the best of husbands. It is to be noticed that those who have loved once or twice already are so much the better educated to a woman's hand; the bright boy of fiction is an odd and most uncomfortable mixture of shyness and coarseness, and needs a deal of civilizing. Lastly (and this is, perhaps, the golden rule), no woman should marry a teetotaller, or a man who does not smoke. It is not for nothing that this "ignoble tabagie," as Michelet calls it, spreads over all the world. Michelet rails against it because it renders you happy apart from thought or work; to provident women this will seem no evil influence in married life. Whatever keeps a man in the front garden, whatever checks wandering fancy and all inordinate ambition, whatever makes for lounging and contentment, makes just so surely for domestic happiness.

These notes, if they amuse the reader at all, will probably amuse him more when he differs than when he agrees with them; at least they will do no harm, for nobody will follow my advice. But the last word is of more concern. Marriage is a step so grave and decisive that it attracts light-headed, variable men by its very awfulness. They have been so tried among the inconstant squalls and currents, so often sailed for islands in the air or lain becalmed with burning heart, that they will risk all for solid ground below their feet. Desperate pilots, they run their sea-sick, weary bark upon the dashing rocks. It seems as if marriage were the royal road through life, and realized, on the instant, what we have all dreamed on summer Sundays when the bells ring, or at night when we cannot sleep for the desire of living. They think it will sober and change them. Like those who join a brotherhood, they fancy it needs but an act to be out of the coil and clamor forever. But this is a wile of the devil's. To the end, spring winds will sow disquietude, passing faces leave a regret behind them, and the whole world keep calling and calling in their ears. For marriage is like life in this—that it is a field of battle, and not a bed of roses.

FRIENDSHIPS¹

George Santayana

FRIENDSHIP is almost always the union of a part of one mind with a part of another; people are friends in spots. Friendship sometimes rests on sharing early memories as do brothers and schoolfellows, who often, but for that now affectionate familiarity with the same old days, would dislike and irritate one another extremely. Sometimes it hangs on passing pleasures and amusements, or on special pursuits; sometimes on mere convenience and comparative lack of friction in living together. One's friends are that part of the human race with which one can be human. But there are youthful friendships of quite another quality, which I seem to have discovered flourishing more often and more frankly in England than in other countries; brief echoes, as it were, of that love of comrades so much celebrated in antiquity. I do not refer to the "friendship of virtue" mentioned by Aristotle, which means, I suppose, community in allegiance or in ideals. It may come to that in the end, considered externally; but community in allegiance or in ideals, if genuine, expresses a common disposition, and its roots are deeper and more physical than itself. The friendship I have in mind is a sense of this initial harmony between two natures, a union of one whole man with another whole man, a sympathy between the centres of their being radiating from those centres on occasion in unanimous thoughts, but not essentially needing to radiate. Trust here is inwardly grounded; likes and dislikes run together without harness, like the steeds of Aurora; you may take agreement for granted without words; affection is generously independent of all tests or external bonds; it can even bear not to be mutual, not to be recognized; and in any case it shrinks from the blatancy of open vows. In such friendships there is a touch of passion and of shyness; an understanding which does not need to become explicit or complete. There is wine in the cup; it is not to be spilled nor gulped down unrelished, but to be sipped slowly, soberly, in the long summer evening, with the window open to the college garden, and the mind full of all that is sweetest to the mind.

Now there is a mystery here—though it need be no mystery—which some people find strange and distressing and would like to hush up. This profound physical sympathy may sometimes, for a moment, spread to the senses; that is one of its possible radiations, though fugitive; and there is a fashionable psychology at hand to explain all friendship, for that reason, as an aberration of sex. Of course it is such in some people, and in many people it may seem to be such at rare moments; but it would be a plain abuse of language to

¹From *Soliloquies in England and Later Soliloquies* (1923), Charles Scribner's Sons.

call a mother's love for her children sexual, even when they are boys, although certainly she could not have that love, nor those children, if she had no sex. Perhaps if we had no sex, we should be incapable of tenderness of any sort; but this fact does not make all forms of affection similar in quality nor in tendency. The love of friends is not, like the love of woman, a lyrical prologue to nest-building. Engaging, no doubt, the same radical instincts, in a different environment and at another phase of their development, it turns them whilst still plastic, in other directions. Human nature is still plastic, especially in the region of emotion, as is proved by the ever-changing forms of religion and art; and it is not a question of right and wrong, nor even, except in extreme cases, of health and disease, but only a question of alternative development, whether the human capacity to love is absorbed in the family cycle, or extends to individual friendships, or to communion with nature or with God. The love of friends in youth, in the cases where it is love rather than friendship, has a mystical tendency. In character, though seldom in intensity, it resembles the dart which, in ecstatic vision, pierced the heart of Saint Theresa, bursting the normal integument by which the blood is kept coursing through generation after generation, in the closed channel of human existence and human slavery. Love then escapes from that round; it is, in one sense, wasted and sterilized; but in being diverted from its earthly labors it suffuses the whole universe with light; it casts its glowing colors on the sunset, upon the altar, upon the past, upon the truth. The anguished futility of love corrects its own selfishness, its own illusion; gradually the whole world becomes beautiful in its inhuman immensity; our very defeats are transfigured, and we see that it was good for us to have gone up into that mountain.

That such mystic emotions, whether in religion or in friendship, are erotic was well known before the days of Freud. They have always expressed themselves in erotic language. And why should they not be erotic? Sexual passion is itself an incident in the life of the Psyche, a transitive phase in the great cycle by which life on earth is kept going. It grows insensibly out of bodily self-love, childish play, and love of sensation; it merges in the end, after its midsummer night's dream, into parental and kingly purposes. How casual, how comic, the purely erotic impulse is, and how lightly nature plays with it, may be seen in the passion of jealousy. Jealousy is inseparable from sexual love, and yet jealousy is not itself erotic either in quality or in effect, since it poisons pleasure, turns sympathy into suspicion, love into hate, all in the interests of proprietorship. Why should we be jealous, if we were simply merry? Nature weaves with a wide loom, and crosses the threads; and erotic passion may be as easily provoked peripherally by deeper impulses as be itself the root of other propensities. Lovers sometimes pretend at first to be only friends, and

friends have sometimes fancied, at first blush, that they were lovers; it is as easy for one habit or sentiment as for the other to prove the radical one, and to prevail in the end. As for Englishmen, the last thing they would do would be to disguise some base prompting in high-flown language; they would call a spade a spade, if there were occasion. They are shy of words, as of all manifestations; and this very shyness, if it proves that there is at bottom a vital instinct concerned, also proves that it is not intrinsically more erotic than social, nor more social than intellectual. It is each of these things potentially, for such faculties are not divided in nature as they are in language; it may turn into any one of them if accident leads it that way; but it reverts from every casual expression to its central seat, which is the felt harmony of life with life, and of life with nature, with everything that in the pulses of this world beats our own measure, and swells the music of our thoughts.

DOES HUMAN NATURE CHANGE?¹

John Dewey

I HAVE come to the conclusion that those who give different answers to the question I have asked in the title of this article are talking about different things. This statement in itself, however, is too easy a way out of the problem to be satisfactory. For there is a real problem, and so far as the question is a practical one instead of an academic one, I think the proper answer is that human nature *does* change.

By the practical side of the question, I mean the question whether or not important, almost fundamental, changes in the ways of human belief and action have taken place and are capable of still taking place. But to put this question in its proper perspective, we have first to recognize the sense in which human nature does not change. I do not think it can be shown that the innate needs of men have changed since man became man or that there is any evidence that they will change as long as man is on the earth.

By "needs" I mean the inherent demands that men make because of their constitution. Needs for food and drink and for moving about, for example, are so much a part of our being that we cannot imagine any condition under which they would cease to be. There are other things not so directly physical that seem to me equally engrained in human nature. I would mention as examples the need for some kind of companionship; the need for exhibiting energy, for bringing one's powers to bear upon surround-

¹From *Problems of Men*, by John Dewey (1946). By permission of the author.

ing conditions; the need for both coöperation with and emulation of one's fellows for mutual aid and combat alike; the need for some sort of aesthetic expression and satisfaction; the need to lead and to follow, etc.

Whether my particular examples are well chosen or not does not matter so much as does recognition of the fact that there are some tendencies so integral a part of human nature that the latter would not be human nature if they changed. These tendencies used to be called instincts. Psychologists are now more chary of using that word than they used to be. But the word by which the tendencies are called does not matter much in comparison to the fact that human nature has its own constitution.

Where we are likely to go wrong, after the fact is recognized that there is something unchangeable in the structure of human nature, is the inference we draw from it. We suppose that the manifestation of these needs is also unalterable. We suppose that the manifestations we have got used to are as natural and as unalterable as are the needs from which they spring.

The need for food is so imperative that we call the persons insane who persistently refuse to take nourishment. But what kinds of food are wanted and used are a matter of acquired habit influenced by both physical environment and social custom. To civilized people today, eating human flesh is an entirely unnatural thing. Yet there have been peoples to whom it seemed natural because it was socially authorized and even highly esteemed. There are well-accredited stories of persons needing support from others who have refused palatable and nourishing foods because they were not accustomed to them; the alien foods were so "unnatural" they preferred to starve rather than eat them.

Aristotle spoke for an entire social order as well as for himself when he said that slavery existed by nature. He would have regarded efforts to abolish slavery from society as an idle and utopian effort to change human nature where it was unchangeable. For according to him it was not simply the desire to be a master that was engrained in human nature. There were persons who were born with such an inherently slavish nature that it did violence to human nature to set them free.

The assertion that human nature cannot be changed is heard when social changes are urged as reforms and improvements of existing conditions. It is always heard when the proposed changes in institutions or conditions stand in sharp opposition to what exists. If the conservative were wiser, he would rest his objections in most cases, not upon the unchangeability of human nature, but upon the inertia of custom; upon the resistance that acquired habits offer to change after they are once acquired. It is hard to teach an old dog new tricks and it is harder yet to teach society to adopt

customs which are contrary to those which have long prevailed. Conservatism of this type would be intelligent, and it would compel those wanting change not only to moderate their pace, but also to ask how the changes they desire could be introduced with a minimum of shock and dislocation.

Nevertheless, there are few social changes that can be opposed on the ground that they are contrary to human nature itself. A proposal to have a society get along without food and drink is one of the few that are of this kind. Proposals to form communities in which there is no cohabitation have been made and the communities have endured for a time. But they are so nearly contrary to human nature that they have not endured long. These cases are almost the only ones in which social change can be opposed simply on the ground that human nature cannot be changed.

Take the institution of war, one of the oldest, most socially reputable of all human institutions. Efforts for stable peace are often opposed on the ground that man is by nature a fighting animal and that this phase of his nature is unalterable. The failure of peace movements in the past can be cited in support of this view. In fact, however, war is as much a social pattern as is the domestic slavery which the ancients thought to be an immutable fact.

I have already said that, in my opinion, combativeness is a constituent part of human nature. But I have also said that the manifestations of these native elements are subject to change because they are affected by custom and tradition. War does not exist because man has combative instincts, but because social conditions and forces have led, almost forced, these "instincts" into this channel.

There are a large number of other channels in which the need for combat has been satisfied, and there are other channels not yet discovered or explored into which it could be led with equal satisfaction. There is war against disease, against poverty, against insecurity, against injustice, in which multitudes of persons have found full opportunity for the exercise of their combative tendencies.

The time may be far off when men will cease to fulfill their need for combat by destroying each other and when they will manifest it in common and combined efforts against the forces that are enemies of all men equally. But the difficulties in the way are found in the persistence of certain acquired social customs and not in the unchangeability of the demand for combat.

Pugnacity and fear are native elements of human nature. But so are pity and sympathy. We send nurses and physicians to the battlefield and provide hospital facilities as "naturally" as we charge bayonets and discharge machine guns. In early times there was a close connection between pugnacity and fighting, for the latter was done largely with the fists. Pugnacity plays

a small part in generating wars today. Citizens of one country do not hate those of another nation by instinct. When they attack or are attacked, they do not use their fists in close combat, but throw shells from a great distance at persons whom they have never seen. In modern wars, anger and hatred come after the war has started; they are effects of war, not the cause of it.

It is a tough job sustaining a modern war; all the emotional reactions have to be excited. Propaganda and atrocity stories are enlisted. Aside from such extreme measures there has to be definite organization, as we saw in the two World Wars, to keep up the morale of even non-combatants. And morale is largely a matter of keeping emotions at a certain pitch; and unfortunately fear, hatred, suspicion, are among the emotions most easily aroused.

I shall not attempt to dogmatize about the causes of modern wars. But I do not think that anyone will deny that they are social rather than psychological, though psychological appeal is highly important in working up a people to the point where they want to fight and in keeping them at it. I do not think, moreover, that anyone will deny that economic conditions are powerful among the social causes of war. The main point, however, is that whatever the sociological causes, they are affairs of tradition, custom, and institutional organization, and these factors belong among the changeable manifestations of human nature, not among the unchangeable elements.

I have used the case of war as a typical instance of what is changeable and what is unchangeable in human nature, in their relation to schemes of social change. I have selected the case because it is an extremely difficult one in which to effect durable changes, not because it is an easy one. The point is that the obstacles in the way are put there by social forces which do change from time to time, not by fixed elements of human nature. This fact is also illustrated in the failures of pacifists to achieve their ends by appeal simply to sympathy and pity. For while, as I have said, the kindly emotions are also a fixed constituent of human nature, the channel they take is dependent upon social conditions.

There is always a great outburst of these kindly emotions in time of war. Fellow feeling and the desire to help those in need are intense during war, as they are at every period of great disaster that comes home to observation or imagination. But they are canalized in their expression; they are confined to those upon our side. They occur simultaneously with manifestation of rage and fear against the other side, if not always in the same person, at least in the community generally. Hence the ultimate failure of pacifist appeals to the kindly elements of native human nature when they are separated from intelligent consideration of the social and economic forces at work.

William James made a great contribution in the title of one of his essays, *The Moral Equivalent of War*. The very title conveys the point I am making. Certain basic needs and emotions are permanent. But they are capable of finding expression in ways that are radically different from the ways in which they now currently operate.

An even more burning issue emerges when any fundamental change in economic institutions and relations is proposed. Proposals for such sweeping change are among the commonplaces of our time. On the other hand, the proposals are met by the statement that the changes are impossible because they involve an impossible change in human nature. To this statement, advocates of the desired changes are only too likely to reply that the present system or some phase of it is contrary to human nature. The argument *pro* and *con* then gets put on the wrong ground.

As a matter of fact, economic institutions and relations are among the manifestations of human nature that are most susceptible of change. History is living evidence of the scope of these changes. Aristotle, for example, held that paying interest is unnatural, and the Middle Ages reëchoed the doctrine. All interest was usury, and it was only after economic conditions had so changed that payment of interest was a customary and in that sense a "natural" thing, that usury got its present meaning.

There have been times and places in which land was held in common and in which private ownership of land would have been regarded as the most monstrous of unnatural things. There have been other times and places when all wealth was possessed by an overlord and his subjects held wealth, if any, subject to his pleasure. The entire system of credit so fundamental in contemporary financial and industrial life is a modern invention. The invention of the joint-stock company with limited liability of individuals has brought about a great change from earlier facts and conceptions of property. I think the need of owning something is one of the native elements of human nature. But it takes either ignorance or a very lively fancy to suppose that the system of ownership that exists in the United States in 1946, with all its complex relations and its interweaving with legal and political supports, is a necessary and unchangeable product of an inherent tendency to appropriate and possess.

Law is one of the most conservative of human institutions; yet through the cumulative effect of legislation and judicial decisions it changes, sometimes at a slow rate, sometimes rapidly. The changes in human relations that are brought about by changes in industrial and legal institutions then react to modify the ways in which human nature manifests itself, and this brings about still further changes in institutions, and so on indefinitely.

It is for these reasons that I say that those who hold that proposals for social change, even of rather a profound character, are impossible and utopian because of the fixity of human nature confuse the resistance to change that comes from acquired habits with that which comes from original human nature. The savage, living in a primitive society, comes nearer to being a purely "natural" human being than does civilized man. Civilization itself is the product of altered human nature. But even the savage is bound by a mass of tribal customs and transmitted beliefs that modify his original nature, and it is these acquired habits that make it so difficult to transform him into a civilized human being.

The revolutionary radical, on the other hand, overlooks the force of engrained habits. He is right, in my opinion, about the indefinite plasticity of human nature. But he is wrong in thinking that patterns of desire, belief, and purpose do not have a force comparable to the inertia, the resistance to movement, possessed by these same objects when they are at rest. Habit, not original human nature, keeps things moving most of the time, about as they have moved in the past.

If human nature is unchangeable, then there is no such thing as education and all our efforts to educate are doomed to failure. For the very meaning of education is modification of native human nature in formation of those new ways of thinking, of feeling, of desiring, and of believing that are foreign to raw human nature. If the latter were unalterable, we might have training but not education. For training, as distinct from education, means simply the acquisition of certain skills. Native gifts can be trained to a point of higher efficiency without that development of new attitudes and dispositions which is the goal of education. But the result is mechanical. It is like supposing that while a musician may acquire by practice greater technical ability, he cannot rise from one plane of musical appreciation and creation to another.

The theory that human nature is unchangeable is thus the most depressing and pessimistic of all possible doctrines. If it were carried out logically, it would mean a doctrine of predestination from birth that would outdo the most rigid of theological doctrines. For according to it, persons are what they are at birth and nothing can be done about it, beyond the kind of training that an acrobat might give to the muscular system with which he is originally endowed. If a person is born with criminal tendencies, a criminal he will become and remain. If a person is born with an excessive amount of greed, he will become a person living by predatory activities at the expense of others; and so on. I do not doubt at all the existence of differences in natural endowment. But what I am questioning is the notion that they doom in-

dividuals to a fixed channel of expression. It is difficult indeed to make a silk purse out of a sow's ear. But the particular form which, say, a natural musical endowment will take depends upon the social influences to which one is subjected. Beethoven in a savage tribe would doubtless have been outstanding as a musician, but he would not have been the Beethoven who composed symphonies.

The existence of almost every conceivable kind of social institution at some time and place in the history of the world is evidence of the plasticity of human nature. This fact does not prove that all these different social systems are of equal value, materially, morally, and culturally. The slightest observation shows that such is not the case. But the fact in proving the changeability of human nature indicates the attitude that should be taken toward proposals for social changes. The question is primarily whether they, in special cases, are desirable or not. And the way to answer that question is to try to discover what their consequences would be if they were adopted. Then if the conclusion is that they are desirable, the further question is how they can be accomplished with a minimum of waste, destruction, and needless dislocation.

In finding the answer to this question, we have to take into account the force of existing traditions and customs; of the patterns of action and belief that already exist. We have to find out what forces already at work can be reinforced so that they move toward the desired change and how the conditions that oppose change can be gradually weakened. Such questions as these can be considered on the basis of fact and reason.

The assertion that a proposed change is impossible because of the fixed constitution of human nature diverts attention from the question of whether or not a change is desirable and from the other question of how it shall be brought about. It throws the question into the arena of blind emotion and brute force. In the end, it encourages those who think that great changes can be produced offhand and by the use of sheer violence.

When our sciences of human nature and human relations are anything like as developed as are our sciences of physical nature, their chief concern will be with the problem of how human nature is most effectively modified. The question will not be whether it is capable of change, but of how it is to be changed under given conditions. This problem is ultimately that of education in its widest sense. Consequently, whatever represses and distorts the processes of education that might bring about a change in human dispositions with the minimum of waste puts a premium upon the forces that bring society to a state of deadlock, and thereby encourages the use of violence as a means of social change.

THE PRINCIPLE OF SELF-ACCEPTANCE¹

Harry Emerson Fosdick

A MODERN novelist describing one of his characters says, "He was not so much a human being as a civil war." This unhappy condition, however it may involve maladjustment to environment, is always complicated by maladjustment to oneself, and such inner discord commonly takes the form of tension between what we are and what we want to be. Every human being sometimes faces a situation where on the one side is his actual self, with his abilities and circumstances, and on the other are ideal pictures of himself as he is ambitious to be and of his achievements as he has set his heart on having them; and between the two is such disparity that they have no practicable relationship. When what we are and what we dearly want to be thus face each other in seemingly hopeless disproportion, inward civil war begins.

This is the more serious because man at his best is distinguished by his capacity to have both an actual and a desired self. Even when we run to catch a bus we are not driven, as the bus is, by posterior force, but are drawn from before by an imagined picture of ourselves seated in the bus and going to our destination. Purposive activity, in which the future tense becomes causative, is man's glory, and nowhere more so than in the development of personality. This faculty, however, can function so abnormally that it tears life to pieces. The ideal confronts the actual, and taunts it; our existent selves see our idealized selves tantalizingly out of reach, and are distraught; in view of the unattainable that we wish, we become disgusted and discouraged with the actual that we are.

No well-integrated life is possible, therefore, without an initial act of self-acceptance, as though to say: I, John Smith, hereby accept myself, with my inherited endowments and handicaps and with the elements in my environment that I cannot alter or control, and, so accepting myself as my stint, I will now see what I can do with *this* John Smith. When Margaret Fuller said, "I accept the universe," Carlyle's retort was, "Gad! she'd better!" Accepting the universe, however, is for many people a simple matter compared with the far more intimate act of accepting themselves.

The coxswain of the winning Freshman crew in one of our largest universities was an eighty-seven pound cripple. Stricken with infantile paralysis in boyhood, he had dropped out seven years of schooling. When allowed to study again he made up for lost time, and, determined not to be a cipher among his fellows, he saw in his dwarfed and handicapped body, even while he was in preparatory school, the positive makings of a good coxswain. So,

¹From *On Being a Real Person*, by Harry Emerson Fosdick. Copyright, 1943, by Harper & Brothers.

in the university, this midget, with a crippled voice so that he needed a special type of megaphone, and crippled arms so that he needed a special type of steering apparatus, won his race and became the hero of the river. When one considers the varied kinds of personal response conceivable in such a case—rebellion, despair, self-pity, apathy, inertia—and when one imagines the desired selves that must have tantalized the actual self with their unattainable allurements, it is clear that at the center of that boy's positive handling of his problem was a courageous act of self-acceptance. As Rank rightly says: "The neurotic type, which we all represent to a certain extent, suffers from the fact that he cannot accept himself, cannot endure himself and will have it otherwise."

Disruptive tension between our actual and desired selves is variously caused. Parents often project into the imaginations of their children ideals and ambitions utterly out of keeping with the aptitudes and abilities of the children themselves. One mother, aspiring to be a singer and frustrated in her own career, transferred her ambition to her daughter. The fierce and baffled desires of her disappointed life were concentrated on her hopes for the girl. Into her daughter's susceptible imagination she poured her own unattainable aspirations, and did it the more persuasively and remorselessly because she conceived her motive as maternal love. The daughter, in consequence, unfitted for the imposed role, found herself at last with an imagination preoccupied by one ambition and a conscience committed to it as a sacred duty, but with an impassable chasm between her actual and her desired self. For the tragic disruption that ensued before the daughter could be brought to accept *herself*, the mother was responsible.

This emphasis is the more needed because popular stress is commonly laid upon the other side. To have large ambitions, to expect the most of ourselves, to attempt even the seemingly impossible and achieve it—is not this the mark of admirable personality? The answer, of course, is affirmative, but that answer needs to be chastened by the fact that the beginning of wise ambition lies in a man's accepting himself as himself and not as someone else, and in trying to make the most and the best of *that* self and not of another. Mistakes at this initial point of departure carry a heavy penalty.

One boy had shone in the limited community where he was born. He was the pride of his large family and alike the handsomest and ablest boy in town. In everything he undertook he was always first, and he grew into young manhood a serious, high-minded youth, headed for one of the major professions but with a dangerous factor in his situation of which he was unaware—a dominant picture of his desired self as always a shining first. Then in a large university he found himself good but not eminent. The

expectations of peerless priority, built into him by his family and friends, proved fallacious. He suffered a serious nervous breakdown without knowing why. Only when he found out why, saw clearly the absurd tension between his actual and imagined self, and went through a thorough process of self-acceptance, did he get himself in hand and go on to make a creditable and serviceable use of the self he really had.

Along with the misused influence of families, the pressure of contemporary culture is often responsible for this disruptive strain. From Periclean Greece to modern Nazidom, how diverse have been the cultures into which human individuals have been born! Nothing runs deeper in human nature than the desire to be appreciated, and in whatever cultural setting a man grows up, he normally tries to meet its characteristic demands and succeed according to its characteristic standards. Imagine, then, the same individual, with his physical, intellectual, and temperamental peculiarities, born in central Africa, in Florence in the thirteenth century, in the United States today, in Japan! In each case the admired ideals, the standards of success, the preferred types of ambition, call for distinctive pictures of the desired self. These cultural patterns, however, are not necessarily fitted to any particular man. Their acceptance may mean the gross maltreatment of his aptitudes. Despite the fact that a culture powerfully helps to make a person what he is, he may find, as millions do, that channeling his life down the river-bed where the main appreciations of his current civilization run, involves the denial of everything that he natively was meant to be and do. Such tension, so caused, is one of man's major tragedies.

No individual self-acceptance alone can solve so vast a problem in its public aspects, but multitudes of individuals, recognizing the nature of the difficulty and seeing clearly what is happening to them, might solve their own problems. Especially in free countries, with many diversities of choice and with various groups whose appreciation may be sought, this problem commonly arises in a form that the wise individual can handle. Tschaikowsky was a lawyer before he became a musician; Gauguin was a banker a decade before he became an artist; Herschel played the organ in a small church and gave lessons to amateur pianists before he became a great scientist. One consulting psychologist even found a ranchman, who had been born a ranchman, who supposed he always must be a ranchman, and who was trying to be a good one although utterly unfitted for it, but who wanted above all else to paint pictures. Daring to accept himself when he was past forty, he actually did paint pictures that were exhibited in leading galleries. If one is going to be a real person, self-discovery and self-acceptance are primary.

When such self-acceptance is not achieved and the strain between the

actual and the dreamed-of self becomes tense, the result is an unhappy and sometimes crushing sense of inferiority. One study of 275 college men and women revealed that over 90% of them suffered from gnawing, frustrated feelings of deficiency. The areas of their conscious inferiority were manifold—physical incompetence, ill health, unpleasant appearance, lack of social charm, failure in love, low-grade intellectual ability, moral failure, and guilt. To say that this disheartening sense of being inferior springs from inability to meet the demands of society is only part of the truth. The social demands strike inward; they conjure up an imagined self—competent, adequate, superior; the final tussle is not so much between the individual and the demands of society, as within the individual, between his dreamed-of self and the self he thinks he actually is.

To be sure, the feeling of deficiency can never be taken at its face value as a true indication of real lack. The feeling is relative and subjective. The runner-up in a championship tennis match may suffer wretchedly from a sense of inadequacy; and while a witless dolt may be well content with himself, the winner of a Nobel Prize, whose dreams completely outdistance his accomplishments, may suffer from an inferiority complex. Not alone the ill-born, hard-bested, and handicapped face this problem, but the well endowed and fortunately circumstanced.

The seriousness of the problem itself is made evident by the unhealthy ways in which it is commonly handled.

Some deal with it by the smoke-screen method. Feeling miserably inferior, and not wanting others to know it, the shy become aggressive, the embarrassed effusive, and the timid bluster and brag. The boastful, cocky, pushing man may seem afflicted with an exaggerated sense of his superiority, whereas in fact he is covering under a masquerade of aggressiveness a wretched feeling of inadequacy. One man, hitherto gentle and considerate in his family, suffered a humiliating failure. At once he began to grow a crust. He became domineering, harsh, dictatorial. Paradoxical though it is, in the days when he felt superior he behaved humbly and considerately, as though he felt inferior; when he felt inferior he began to swagger as though he were superior. Nowhere does the etymological meaning of personality run more true to form—it originally came from the Latin *persona*, meaning "mask."

Others, like the fox in Aesop's fable, handle the problem of bitterly felt inferiority by calling sour all grapes they cannot reach. The frail youth discounts athletics; the debauchee, really suffering from a sense of guilt, scoffs at the self-controlled as prudes; the failure at school or college, deeply humiliated, scorns intellectuals as "high-brows"; the girl without charm exaggerates her liability, dresses crudely, adopts rough manners, deliberately looks

her worst, professing lofty disdain of charm as a triviality. A major amount of cynicism springs from this source. Watch what people are cynical about, and one can often discover what they lack, and subconsciously, beneath their touchy condescension, deeply wish they had.

Others deal with this tension between the actual and the desired self by fantasy. Unable in the real world to secure their longed-for eminence, they retreat into the world of daydream. In school, business, social intercourse, and love they may be obscure and mistreated, but in this other realm, which reverie creates, they walk fortunate and renowned. Daydreaming in itself is a useful faculty; it can furnish both harmless escape from boredom and struggle, and constructive suggestions for positive endeavor; but when it coincides with severe tension between the actual and the idealized self, it is commonly put to abnormal uses. The imagined world, where the self is all it dreams of being, can become more vivid than the real world, and, habitually inhabiting this pictured paradise of fulfilled hopes, the individual can be disqualified for any constructive dealing with his actual self in the existent situation. In the end the pictured world may become so dominant that the real world is no longer clearly seen, and the individual passes over the border into abnormality.

Still others, facing the strain of a wished-for self, tantalizingly out of reach, turn in precisely the opposite direction—not to dreams of hopes fulfilled, but to excuses and retreats based on an exaggerated acknowledgment of their inferiority. So one student who was struggling with failure said: "I have thought it over carefully and I have come to the conclusion that I am feeble-minded!" Far from being said with despair, this was announced with relief; it was a perfect excuse; it let him out from all responsibility. Factually it was absurd; emotionally it was abnormal; but as a defense mechanism it promised release from the taunting challenge of his idealized self. Indeed, so ready an escape does this method provide that the human organism often takes to it subconsciously. Baffled by a sense of failure, the individual develops psychic illnesses, pseudo-maladies, neurotic diseases, in the presence of which he is dispensed from any endeavor to be his desired self.

By such unwholesome methods many evade the basic act of healthy self-acceptance. Being Mr. One-Talent, they will be content with nothing except being Mr. Ten-Talent, or, being Mr. Ten-Talent, they tease themselves out of all happy and coherent living because they are not more. They have the admirable quality of aspiration, ambition, emulation, but they misuse it. A Ford car yearning to be a Rolls Royce is absurd, but a Ford car that accepts itself can easily outlast and outserve, if it be well used, a Rolls Royce that is poorly handled, and it can travel some rough and crooked roads where a Rolls Royce cannot go or would be ridiculous if it did.

Fine Arts

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ON SETTING WORDS TO MUSIC¹

Benjamin Franklin

DEAR BROTHER:

I like your ballad, and think it well adapted to the purpose of discountenancing expensive foppery, and encouraging industry and frugality. If you can get it generally sung in your country, it may probably have a good deal of the effect you hope and expect from it. But, as you aimed at making it general, I wonder you chose so uncommon a measure in poetry, that none of the tunes in common use will suit it. Had you fitted it to an old one, well known, it must have spread much faster than I doubt it will do from the best tune we can get composed to it. I think, too, that if you had given it to some country girl in the heart of Massachusetts who has never heard any other than psalm tunes, or Chevy Chase, the Children in the Wood, the Spanish Lady, and such old simple ditties, but has naturally a good ear, she might more probably have made a pleasing, popular tune for you, than any of our masters here, and more proper for your purpose; which would best be answered if every word, as it is sung, be understood by all that hear it, and if the emphasis you intend for particular words could be given by the singer as well as by the reader; much of the force and impression of the song depending on these circumstances. I will however, get it as well done for you as I can.

Do not imagine that I mean to depreciate the skill of our composers here; they are admirable at pleasing practiced ears, and know how to delight one another; but in composing songs, the reigning taste seems to be quite out of nature, or rather the reverse of nature, and yet, like a torrent, hurries them all away with it—one or two, perhaps, only excepted.

You, in the spirit of some ancient legislators, would influence the manners of your country by the united powers of poetry and music. By what I can learn of their songs, the music was simple, conforming itself to the usual pronunciation of words, as to measure, cadence, or emphasis, etc.; never disguising and confounding the language by making a long syllable short, or a short one long when sung. Their singing was only a more pleasing because a melodious manner of speaking; it was capable of all the graces of prose oratory, while it added the pleasure of harmony. Most modern songs, on the contrary, neglect all the properties and beauties of common speech, and in their place introduce its defects and absurdities as so many graces.

I am afraid you will hardly take my word for this; and therefore I must

¹Letter from Benjamin Franklin to Mr. Peter Franklin, From the *Pennsylvania Magazine*. 1776.

FINE ARTS

endeavor to support it by proof. Here is the first song I lay my hand upon; it happens to be a composition of one of our greatest masters, the ever famous Handel. It is not one of his juvenile performances before his taste could be improved and formed; it appeared when his reputation was at the highest, is greatly admired by all his admirers, and is really excellent in its kind. It is called the "Additional favorite song in Judas Maccabeus." Now, I reckon among the defects and improprieties of common speech the following:

- (1) Wrong placing of the accent or emphasis by laying it on words of no importance, or on wrong syllables.
- (2) Drawling; or extending the sound of words or syllables beyond their natural length.
- (3) Stuttering; or making many syllables of one.
- (4) Unintelligibleness; the result of the three foregoing united.
- (5) Tautology; and
- (6) Screaming without cause.

For the wrong placing of the accent or emphasis, see it on the word *their*, instead of the word *vain*, in the following instances:



And on the word *from*, and the wrong syllable, *like*:



For the drawling, see the last syllable of the word *wounded*:



For the stuttering, see the *ne'er relieve*, in



Here are four syllables made of one, and eight of three; but this is moderate. I have seen in another song (that I cannot find) seventeen syllables made of three, and sixteen of one; the latter, I remember, was charms, viz: cha-a-a-a-a-a-a-a-arms.—Stammering with a witness! For the unintelligibleness, give this whole song to any taught singer, and let her sing it to any company that have never heard it; you will find that they will not understand three words in ten. It is therefore that, at the oratorios and operas, one sees with books in their hands all those who desire to understand what they hear sung by even our best performers.

For the tautology, you have it in the endless repetitions.

As to the Screaming, no one who has frequented our operas but will painfully recall instances without number.

I send you enclosed the song, with its music at length. Read the words without the repetitions. Observe how few they are and what a shower of notes attend them. You will then, perhaps, be inclined to think with me, that though the words might be the principal part of an ancient song, they are of small importance in a modern one; they are in short, only a pretense for singing. I am, as ever,

Your affectionate brother,

B. FRANKLIN

P.S. I might have mentioned inarticulation among the defects in common speech that are assumed as beauties in modern singing. But as that seems more the fault of the singer than of the composer, I omitted it in what related merely to the composition. The fine singer, in the present mode, stifles all the hard consonants, and polishes away all the rougher parts of words that serve to distinguish them from each other, so that you hear nothing but an admirable pipe, and understand no more of the song than you would from its tune, played on any other instrument. If ever it was the ambition of musicians to make instruments that should imitate the human voice, that ambition seems now reversed, the voice aiming to be like an instrument. Thus wigs were first made to imitate a good natural head of hair; but when they became fashionable, though in unnatural forms, we have seen natural hair dressed to look like wigs.

A CHAPTER ON EARS¹

Charles Lamb

I HAVE no ear.—

Mistake me not, reader,—nor imagine that I am by nature destitute of those exterior twin appendages, hanging ornaments, and (architecturally speaking) handsome volutes to the human capital. Better my mother had never borne me.— I am, I think, rather delicately than copiously provided with those conduits; and I feel no disposition to envy the mule for his plenty, or the mole for her exactness, in those ingenious labyrinthine inlets—those indispensable side-intelligencers.

Neither have I incurred, nor done anything to incur, with Defoe, that hideous disfigurement, which constrained him to draw upon assurance—to feel “quite unabashed,”² and at ease upon that article. I was never, I thank my stars, in the pillory; nor, if I read them aright, is it within the compass of my destiny, that I ever should be.

When therefore I say that I have no ear, you will understand me to mean—for *music*.— To say that this heart never melted at the concourse of sweet sounds, would be a foul self-libel.— “*Water parted from the sea*” never fails to move it strangely. So does “*In infancy*.” But they were used to be sung at her harpsichord (the old-fashioned instrument in vogue in those days) by a gentlewoman—the gentlest, sure, that ever merited the appellation—the sweetest—why should I hesitate to name Mrs. S——, once the blooming Fanny Weatheral of the Temple—who had power to thrill the soul of Elia, small imp as he was, even in his long coats; and to make him glow, tremble, and blush with a passion that not faintly indicated the day-spring of that absorbing sentiment, which was afterwards destined to overwhelm and subdue his nature quite, for Alice W——n.

I even think that *sentimentally* I am disposed to harmony. But *organically* I am incapable of a tune. I have been practising “*God save the King*” all my life; whistling and humming of it over to myself in solitary corners; and am not yet arrived, they tell me, within many quavers of it. Yet hath the loyalty of Elia never been impeached.

I am not without suspicion that I have an undeveloped faculty of music within me. For, thrumming, in my wild way, on my friend A.’s piano, the other morning, while he was engaged in an adjoining parlour,—on his return he was pleased to say, “*he thought it could not be the maid!*” On his first

¹From *London Magazine*, March, 1821.

²“Earless on high stood, unabashed, Defoe.” [Lamb’s note] *Dunciad*. Defoe had his ears cropped and was placed in the pillory.

surprise at hearing the keys touched in somewhat an airy and masterful way, not dreaming of me, his suspicions had lighted on *Jenny*. But a grace, snatched from a superior refinement, soon convinced him that some being,—technically perhaps deficient, but higher informed from a principle common to all the fine arts,—had swayed the keys to a mood which *Jenny*, with all her (less cultivated) enthusiasm, could never have elicited from them. I mention this as proof of my friend's penetration and not with any view of disparaging *Jenny*.

Scientifically I could never be made to understand (yet have I taken some pains) what a note in music is; or how one note should differ from another. Much less in voices can I distinguish a soprano from a tenor. Only sometimes the thorough bass I contrive to guess at, from its being supereminently harsh and disagreeable. I tremble, however, for my misapplication of the simplest terms of *that* which I disclaim. While I profess my ignorance, I scarce know what to *say* I am ignorant of. I hate, perhaps, by misnomers. *Sostenuto* and *adagio* stand in the like relation of obscurity to me; and *Sol, Fa, Mi, Re*, is as conjuring as *Baralippton*.

It is hard to stand alone—in an age like this,—(constituted to the quick and critical perception of all harmonious combinations, I verily believe, beyond all preceding ages, since Jubal stumbled upon the gamut) to remain, as it were, singly unimpressible to the magic influences of an art, which is said to have such an especial stroke at soothing, elevating and refining the passions.— Yet rather than break the candid current of my confessions, I must avow to you, that I have received a great deal more pain than pleasure from this so cried-up faculty.

I am constitutionally susceptible to noises. A carpenter's hammer, in a warm summer noon, will fret me into more than mid-summer madness. But those unconnected, unset sounds are nothing to the measured malice of music. The ear is passive to those single strokes; willingly enduring stripes, while it hath no task to con. To music it cannot be passive. It will strive—mine at least will—'spite of its inaptitude to thrid the maze; like an unskilled eye painfully poring upon hieroglyphics. I have sat through an Italian Opera, till, for sheer pain, and inexplicable anguish, I have rushed out into the noisiest places of the crowded streets, to solace myself with sounds which I was not obliged to follow, and get rid of the distracting torment of endless, fruitless, barren attention! I take refuge in the unpretending assemblage of honest, common-life sounds;—and the purgatory of the Enraged Musician becomes my paradise.

I have sat at an Oratorio (that profanation of the purposes of the cheerful playhouse) watching the faces of the auditory in the pit (what a contrast to Hogarth's Laughing Audience!) immovable, or affecting some faint emotion,

—till (as some have said, that our occupations in the next world will be but a shadow of what delighted us in this) I have imagined myself in some cold Theatre in Hades, where some of the *forms* of the earthly one should be kept up, with none of the *enjoyment*; or like that—

—Party in a parlour,
All silent, and all DAMNED.

Above all, those insufferable concertos, and pieces of music, as they are called, do plague and embitter my apprehension.— Words are something; but to be exposed to an endless battery of mere sounds; to be long a dying, to lie stretched upon a rack of roses; to keep up languor by unintermitted effort; to pile honey upon sugar, and sugar upon honey, to an interminable tedious sweetness; to fill up sound with feeling, and strain ideas to keep pace with it; to gaze on empty frames, and be forced to make the pictures for yourself; to read a book, *all stops*, and be obliged to supply the verbal matter; to invent extempore tragedies to answer to the vague gestures of an unexplicable rambling mime—these are faint shadows of what I have undergone from a series of the ablest-executed pieces of this empty *instrumental music*.

I deny not, that in the opening of a concert, I have experienced something vastly lulling and agreeable:—afterwards followeth the languor, and the oppression. Like that disappointing book in Patmos; or, like the comings on of melancholy, described by Burton, doth music make her first insinuating approaches;—"Most pleasant it is to such as are melancholy given, to walk alone in some solitary grove, betwixt wood and water, by some brook side, and to meditate upon some delightsome and pleasant subject, which shall affect him most, *amabilis insaniâ*,³ and *mentis gratissimus error*.⁴ A most incomparable delight to build castles in the air, to go smiling to themselves, acting an infinite variety of parts, which they suppose, and strongly imagine, they act, or that they see done.— So delightsome these toys at first, they could spend whole days and nights without sleep, even whole years in such contemplations, and fantastical meditations, which are like so many dreams, and will hardly be drawn from them—winding and unwinding themselves as so many clocks, and still pleasing their humours, until at last the SCENE TURNS UPON A SUDDEN, and they being now habitated to such meditations, and solitary places, can endure no company, can think of nothing but harsh and distasteful subjects. Fear, sorrow, suspicion, *subrusticus pudor*,⁵ discontent, cares, and weariness of life, surprise them on a sudden, and they can think of nothing else: continually suspecting, no sooner are their eyes open, but this infernal plague of melancholy seizeth on them, and terrifies their souls, representing

³Pleasing madness.

⁴Most delightful delusion.

⁵Rustic shyness.

some dismal object to their minds; which now, by no means, no labour, no persuasions they can avoid, they cannot be rid of it, they cannot resist."

Something like this "SCENE-TURNING" I have experienced at the evening parties, at the house of my good Catholic friend *Nov*—; who, by the aid of a capital organ, himself the most finished of players, converts his drawing-room into a chapel; his week days into Sundays, and these latter into minor heavens.⁶

When my friend commences upon one of those solemn anthems which peradventure struck upon my heedless ear, rambling in the side aisles of the dim abbey, some five and thirty years since, waking a new sense and putting a soul of old religion into my young apprehension—whether it be *that*, in which the psalmist, weary of the persecutions of bad men, wisheth to himself dove's wings—or *that other*, which, with a like measure of sobriety and pathos, inquireth by what means the young man shall best cleanse his mind—a holy calm pervadeth me,—I am for the time

—rapt above earth,
And possess joys not promised at my birth.

But when this master of the spell, not content to have laid a soul prostrate, goes on, in his power, to inflict more bliss than lies in her capacity to receive,—impatient to overcome her "earthly" with his "heavenly,"—still pouring in, for protracted hours, fresh waves and fresh from the sea of sound, or from that inexhausted *German* ocean, above which, in triumphant progress, dolphin-seated, ride those Arions *Haydn* and *Mozart*, with their attendant tritons, *Bach*, *Beethoven*, and a countless tribe, whom to attempt to reckon up would but plunge me again in the deeps,—I stagger under the weight of harmony, reeling to and fro at my wit's end;—clouds, as of frankincense, oppress me—priests, altars, censers, dazzle before me—the genius of *his* religion hath me in her toils—a shadowy triple tiara invests the brow of my friend, fate so naked, so ingenious—he is Pope,—and by him sits, like as in the anomaly of dreams, a she-Pope too,—tri-coroneted like himself! I am converted, and yet a Protestant;—at once *malleus hereticorum*,⁷ and myself grand heresiarch: or three heresies centre in my person:—I am Marcion, Ebion, and Cerinthus—Gog and Magog—what not?—till the coming in of the friendly suppertray dissipates the figment, and a draught of true Lutheran beer (in which chiefly my friend shows himself no bigot) at once reconciles me to the rationalities of a purer faith; and restores to me the genuine untterrifying aspects of my pleasant-countenanced host and hostess.

⁶I have been there, and still would go;

⁷'Tis like a little heaven below.—Dr. Watts

[Lamb's note]

⁷Hammer of the heretics.

GREATNESS IN ART¹

John Ruskin

IN THE 15th Lecture of Sir Joshua Reynolds, incidental notice is taken of the distinction between those excellences in the painter which belong to him as such, and those which belong to him in common with all men of intellect, the general and exalted powers of which art is the evidence and expression, not the subject. But the distinction is not there dwelt upon as it should be, for it is owing to the slight attention ordinarily paid to it, that criticism is open to every form of coxcombry, and liable to every phase of error. It is a distinction on which depend all sound judgment of the rank of the artist, and all just appreciation of the dignity of art.

Painting, or art generally, as such, with all its technicalities, difficulties, and particular ends, is nothing but a noble and expressive language, invaluable as the vehicle of thought, but by itself nothing. He who has learned what is commonly considered the whole art of painting, that is, the art of representing any natural object faithfully, has as yet only learned the language by which his thoughts are to be expressed. He has done just as much toward being that which we ought to respect as a great painter, as a man who has learned how to express himself grammatically and melodiously has toward being a great poet. The language is, indeed, more difficult of acquirement in the one case than in the other, and possesses more power of delighting the sense, while it speaks to the intellect; but it is, nevertheless, nothing more than language, and all those excellences which are peculiar to the painter as such, are merely what rhythm, melody, precision, and force are in the words of the orator and the poet, necessary to their greatness, but not the test of their greatness. It is not by the mode of representing and saying, but by what is represented and said, that the respective greatness either of the painter or the writer is to be finally determined.

Speaking with strict propriety, therefore, we should call a man a great painter only as he excelled in precision and force in the language of lines, and a great versifier, as he excelled in precision and force in the language of words. A great poet would then be a term strictly, and in precisely the same sense, applicable to both, if warranted by the character of the images or thoughts which each in their respective languages conveyed.

Take, for instance, one of the most perfect poems or pictures (I used the words as synonymous) which modern times have seen:—the “Old Shepherd’s Chief-mourner.” Here the exquisite execution of the glossy and crisp hair of the dog, the bright sharp touching of the green bough beside it, the clear

¹From *Modern Painters*, Vol. I, Pt. 1, §1, Ch. 2 (1843).

painting of the wood of the coffin and the folds of the blanket, are language—language clear and expressive in the highest degree. But the close pressure of the dog's breast against the wood, the convulsive clinging of the paws, which has dragged the blanket off the trestle, the total powerlessness of the head laid, close and motionless, upon its folds, the fixed and tearful fall of the eye in its utter hopelessness, the rigidity of repose which marks that there has been no motion nor change in the trance of agony since the last blow was struck on the coffin-lid, the quietness and gloom of the chamber, the spectacles marking the place where the Bible was last closed, indicating how lonely has been the life, how unwatched the departure of him who is now laid solitary in his sleep;—these are all thoughts—thoughts by which the picture is separated at once from hundreds of equal merit, as far as mere painting goes, by which it ranks as a work of high art, and stamps its author, not as the neat imitator of the texture of a skin, or the fold of a drapery, but as the Man of Mind.

It is not, however, always easy, either in painting or literature, to determine where the influence of language stops, and where that of thought begins. Many thoughts are so dependent upon the language in which they are clothed, that they would lose half their beauty if otherwise expressed. But the highest thoughts are those which are least dependent on language, and the dignity of any composition, and praise to which it is entitled, are in exact proportion to its independency of language or expression. A composition is indeed usually most perfect, when to such intrinsic dignity is added all that expression can do to attract and adorn; but in every case of supreme excellence this all becomes as nothing. We are more gratified by the simplest lines or words which can suggest the idea in its own naked beauty, than by the robe and the gem which conceal while they decorate; we are better pleased to feel by their absence how little they could bestow, than by their presence how much they can destroy.

There is therefore a distinction to be made between what is ornamental in language and what is expressive. That part of it which is necessary to the embodying and conveying of the thought is worthy of respect and attention as necessary to excellence, though not the test of it. But that part of it which is decorative has little more to do with the intrinsic excellence of the picture than the frame or the varnishing of it. And this caution in distinguishing between the ornamental and the expressive is peculiarly necessary in painting; for in the language of words it is nearly impossible for that which is not expressive to be beautiful, except by mere rhythm or melody, any sacrifice to which is immediately stigmatized as error. But the beauty of mere language in painting is not only very attractive and entertaining to the spectator, but requires for its attainment no small exertion of mind and devotion of time by the artist.

Hence, in art, men have frequently fancied that they were becoming rhetoricians and poets when they were only learning to speak melodiously, and the judge has over and over again advanced to the honor of authors those who were never more than ornamental writing-masters.

Most pictures of the Dutch school, for instance, excepting always those of Rubens, Vandyke, and Rembrandt, are ostentatious exhibitions of the artist's power of speech, the clear and vigorous elocution of useless and senseless words; while the early efforts of Cimabue and Giotto are the burning messages of prophecy, delivered by the stammering lips of infants. It is not by ranking the former as more than mechanics, or the latter as less than artists, that the taste of the multitude, always awake to the lowest pleasures which art can bestow, and blunt to the highest, is to be formed or elevated. It must be the part of the judicious critic carefully to distinguish what is language, and what is thought, and to rank and praise pictures chiefly for the latter, considering the former as a totally inferior excellence, and one which cannot be compared with nor weighed against thought in any way nor in any degree whatsoever. The picture which has the nobler and more numerous ideas, however awkwardly expressed, is a greater and a better picture than that which has the less noble and less numerous ideas, however beautifully expressed. No weight, nor mass, nor beauty of execution, can outweigh one grain or fragment of thought. Three penstrokes of Raffaele are a greater and a better picture than the most finished work that ever Carlo Dolci polished into inanity. A finished work of a great artist is only better than its sketch, if the sources of pleasure belonging to color and realization—valuable in themselves—are so employed as to increase the impressiveness of the thought. But if one atom of thought has vanished, all color, all finish, all execution, all ornament, are too dearly bought. Nothing but thought can pay for thought, and the instant that the increasing refinement or finish of the picture begins to be paid for by the loss of the faintest shadow of an idea, that instant all refinement or finish is an excrescence and a deformity.

Yet although in all our speculations on art, language is thus to be distinguished from, and held subordinate to, that which it conveys, we must still remember that there are certain ideas inherent in language itself, and that, strictly speaking, every pleasure connected with art has in it some reference to the intellect. The mere sensual pleasure of the eye, received from the most brilliant piece of coloring, is as nothing to that which it receives from a crystal prism, except as it depends on our perception of a certain meaning and intended arrangement of color, which has been the subject of intellect. Nay, the term *idea*, according to Locke's definition of it, will extend even to the sensual impressions themselves as far as they are "things which the mind occupies itself

PREFACE · JOSEPH CONRAD

about in thinking"; that is, not as they are felt by the eye only, but as they are received by the mind through the eye. So that, if I say that the greatest picture is that which conveys to the mind of the spectator the greatest number of the greatest ideas, I have a definition which will include as subjects of comparison every pleasure which art is capable of conveying. If I were to say, on the contrary, that the best picture was that which most closely imitated nature, I should assume that art could only please by imitating nature; and I should cast out of the pale of criticism those parts of works of art which are not imitative, that is to say, intrinsic beauties of color and form, and those works of art wholly, which, like the Arabesques of Raffaele in the Loggias, are not imitative at all. Now I want a definition of art wide enough to include all its varieties of aim. I do not say, therefore, that the art is greatest which gives most pleasure, because perhaps there is some art whose end is to teach, and not to please. I do not say that the art is greatest which teaches us most, because perhaps there is some art whose end is to please, and not to teach. I do not say that the art is greatest which imitates best, because perhaps there is some art whose end is to create and not to imitate. But I say that the art is greatest which conveys to the mind of the spectator, by any means whatsoever, the greatest number of the greatest ideas; and I call an idea great in proportion as it is received by a higher faculty of the mind, and as it more fully occupies, and in occupying, exercises and exalts, the faculty by which it is received.

If this, then, be the definition of great art, that of a great artist naturally follows. He is the greatest artist who has embodied, in the sum of his works, the greatest number of the greatest ideas.

PREFACE¹

Joseph Conrad

A WORK that aspires, however humbly, to the condition of art should carry its justification in every line. And art itself may be defined as a single-minded attempt to render the highest kind of justice to the visible universe, by bringing to light the truth, manifold and one, underlying its every aspect. It is an attempt to find in its forms, in its colors, in its light, in its shadows, in the aspects of matter and in the facts of life, what of each is fundamental, what is enduring and essential—their one illuminating and convincing quality—the very truth of their existence. The artist, then, like

¹From *The Nigger of the Narcissus*, by Joseph Conrad. Copyright 1897, 1914 by Doubleday, Doran & Company, Inc.

the thinker or the scientist, seeks the truth and makes his appeal. Impressed by the aspect of the world the thinker plunges into ideas, the scientist into facts—whence, presently, emerging they make their appeal to those qualities of our being that fit us best for the hazardous enterprise of living. They speak authoritatively to our common-sense, to our intelligence, to our desire of peace or to our desire of unrest; not seldom to our prejudices, sometimes to our fears, often to our egoism—but always to our credulity. And their words are heard with reverence, for their concern is with weighty matters; with the cultivation of our minds and the proper care of our bodies: with the attainment of our ambitions: with the perfection of the means and the glorification of our precious aims.

It is otherwise with the artist.

Confronted by the same enigmatical spectacle the artist descends within himself, and in that lonely region of stress and strife, if he be deserving and fortunate, he finds the terms of his appeal. His appeal is made to our less obvious capacities; to that part of our nature which, because of the warlike conditions of existence, is necessarily kept out of sight within the more resisting and hard qualities—like the vulnerable body within a steel armor. His appeal is less loud, more profound, less distinct, more stirring—and sooner forgotten. Yet its effect endures forever. The changing wisdom of successive generations discards ideas, questions facts, demolishes theories. But the artist appeals to that part of our being which is not dependent on wisdom; to that in us which is a gift and not an acquisition—and, therefore, more permanently enduring. He speaks to our capacity for delight and wonder, to the sense of mystery surrounding our lives: to our sense of pity, and beauty, and pain: to the latent feeling of fellowship with all creation—and to the subtle but invincible conviction of solidarity in dreams, in joy, in sorrow, in aspirations, in illusions, in hope, in fear, which binds men to each other, which binds together all humanity—the dead to the living and the living to the unborn.

It is only some such train of thought, or rather of feeling, that can in a measure explain the aim of the attempt, made in the tale which follows, to present an unrestful episode in the obscure lives of a few individuals out of all the disregarded multitude of the bewildered, the simple and the voiceless. For, if there is any part of truth in the belief confessed above, it becomes evident that there is not a place of splendor or a dark corner of the earth that does not deserve, if only a passing glance of wonder and pity. The motive, then, may be held to justify the matter of the work: but this preface, which is simply an avowal of endeavor, cannot end here—for the avowal is not yet complete.

Fiction—if it at all aspires to be art—appeals to temperament. And in truth it must be, like painting, like music, like all art, the appeal of one tem-

perament to all the other innumerable temperaments whose subtle and resistless power endows passing events with their true meaning, and creates the moral, the emotional atmosphere of the place and time. Such an appeal to be effective must be an impression conveyed through the senses; and, in fact, it cannot be made in any other way, because temperament, whether individual or collective, is not amenable to persuasion. All art, therefore, appeals primarily to the senses, and the artistic aim when expressing itself in written words must also make its appeal through the senses, if its high desire is to reach the secret spring of responsive emotions. It must strenuously aspire to the plasticity of sculpture, to the color of painting, and to the magic suggestiveness of music—which is the art of arts. And it is only through complete, unswerving devotion to the perfect blending of form and substance; it is only through an unremitting never-discouraged care for the shape and ring of sentences that an approach can be made to plasticity, to color; and the light of magic suggestiveness may be brought to play for an evanescent instant over the commonplace surface of words: of the old, old words, worn thin, defaced by ages of careless usage.

The sincere endeavor to accomplish that creative task, to go as far on that road as his strength will carry him, to go undeterred by faltering, weariness or reproach, is the only valid justification for the worker in prose. And if his conscience is clear, his answer to those who, in the fullness of a wisdom which looks for an immediate profit, demand specifically to be edified, consoled, amused; who demand to be promptly improved, or encouraged, or frightened, or shocked, or charmed, must run thus:—My task which I am trying to achieve is, by the power of the written word, to make you hear, to make you feel—it is, before all, to make you see. That—and no more, and it is everything. If I succeed, you shall find there according to your deserts: encouragement, consolation, fear, charm—all you demand and, perhaps, also that glimpse of truth for which you have forgotten to ask.

To snatch in a moment of courage, from the remorseless rush of time, a passing phase of life, is only the beginning of the task. The task approached in tenderness and faith is to hold up unquestioningly, without choice and without fear, the rescued fragment before all eyes and in the light of a sincere mood. It is to show its vibration, its color, its form; and through its movement, its form, and its color, reveal the substance of its truth—disclose its inspiring secret: the stress and passion within the core of each convincing moment. In a single-minded attempt of that kind, if one be deserving and fortunate, one may perchance attain to such clearness of sincerity that at last the presented vision of regret or pity, of terror or mirth, shall awaken in the hearts of the beholders that feeling of unavoidable solidarity; of the solidarity in mys-

terious origin, in toil, in joy, in hope, in uncertain fate, which binds men to each other and all mankind to the visible world.

It is evident that he who, rightly or wrongly, holds by the convictions expressed above cannot be faithful to any one of the temporary formulas of his craft. The enduring part of them—the truth which each only imperfectly veils—should abide with him as the most precious of his possessions, but they all: Realism, Romanticism, Naturalism, even the unofficial sentimentalism (which like the poor, is exceedingly difficult to get rid of) all these gods must, after a short period of fellowship, abandon him—even on the very threshold of the temple—to the stammerings of his conscience and to the outspoken consciousness of the difficulties of his work. In that uneasy solitude the supreme cry of Art for Art, itself, loses the exciting ring of its apparent immorality. It sounds far off. It has ceased to be a cry, and is heard only as a whisper, often incomprehensible, but at times and faintly encouraging.

Sometimes, stretched at ease in the shade of a roadside tree, we watch the motions of a laborer in a distant field, and after a time, begin to wonder languidly as to what the fellow may be at. We watch the movements of his body, the waving of his arms, we see him bend down, stand up, hesitate, begin again. It may add to the charm of an idle hour to be told the purpose of his exertions. If we know he is trying to lift a stone, to dig a ditch, to uproot a stump, we look with a more real interest at his efforts; we are disposed to condone the jar of his agitation upon the restfulness of the landscape; and even, if in a brotherly frame of mind, we may bring ourselves to forgive his failure. We understood his object, and, after all, the fellow has tried, and perhaps he had not the strength—and perhaps he had not the knowledge. We forgive, go on our way—and forget.

And so it is with the workman of art. Art is long and life is short, and success is very far off. And, thus, doubtful of strength to travel so far, we talk a little about the aim—the aim of art, which, like life itself, is inspiring, difficult—obscured by mists. It is not in the clear logic of a triumphant conclusion; it is not in the unveiling of one of those heartless secrets which are called the Laws of Nature. It is not less great, but only more difficult.

To arrest, for the space of a breath, the hands busy about the work of the earth, and compel men entranced by the sight of distant goals to glance for a moment at the surrounding vision of form and color, of sunshine and shadows; to make them pause for a look, for a sigh, or a smile—such is the aim, difficult and evanescent, and reserved only for a very few to achieve. But sometimes, by the deserving and the fortunate, even that task is accomplished. And when it is accomplished—behold!—all the truth of life is there: a moment of vision, a sigh, a smile—and then return to an eternal rest.

THE GREAT RICH VINE¹

John Holmes

THE poet is an accident combining a boundless variety of sympathies, quick physical responses, a tough saneness of resistance, an incredible conviction that he stands under the middle of the arch of the world, and a hard necessity to share, to teach, to tell—all these in one body owning a set of five sharp senses, a heart always a little too full, an eagerly curious mind, and a greed for every possible experience.

It is no easier for him to cultivate his inward estate to something like orderly productivity and enduring habitation than it is for someone else to bound that area and enclose it with a sturdy definition. His borders are forever shifting. He hopes they are enlarging, and his peculiar acquisitiveness for lively memories from the country of the mind makes it rather certain that they are. Sometimes his estate seems to shape itself with a wide emphasis south southeast, while his customary latitudes are abandoned. Sometimes his residence and activities are at the opposite direction of the compass. But in the course of time he pushes his borders farther and farther out from the centre, and makes them symmetrical; within he seeds here and harvests there, repairs highroads and tramps out fresh bypaths, inspects old ideas and fences in new ones. Some fields he passes by and looks the other way. He is as patient as nature with others, and eager as the wind with still others. And somewhere in this soil the deep-thrust roots of the tree of life draw nourishment, and find it rich.

Having language, the poet is able to tell what it is he feels about his world, both the inner and the outer. Before he had language, we do not know what he did; he may have run up a hill and looked abroad, like stout Balboa on a peak in Darien, and shouted loudly. But a shout cannot be written down for second performance. He may have found satisfaction in pounding the trunk of a tree with a good thick club; but that, too, would be a little difficult to record. He may have danced his delight, or his terror, or hatred, or reverence, and probably did; the dance could be remembered and repeated.

But when there was a language, and therefore determined meanings for certain sounds, it was his great pleasure to make words dance with the exact posture, the same swiftness, the same satisfaction of rhythm that patterned his dance. There is even a mode of taste that returns through the nameless centuries to catch again that shout, that hearty tree-drubbing, in what is also called poetry. However, in imitation by words lies the art of poetry; and at last, when the words themselves have come to have such rolling reverberations

¹From *The Poet's Work* by John Holmes. Oxford University Press, 1939.

of meaning, such ghostly genealogies of memory, such Saturn rings of light around them, all the dance is in the words: poetry is words. The poet finds himself under a compulsion to arrange words in patterns, the most tangible parts of which seem to be printer's ink on a white page. Actually what drives him is a necessity for summoning these ancestries of meaning into significant order; for arranging these overtones into a symphony; for translating the subtly outgoing signals into a newer message. These intangibilities rise from the black letters into the astonished and illumined brain of the reader, and that is poetry.

It is when words have been put together, and words so plain in themselves joined to make phrases like 'this goodly frame, the earth . . . this majestic roof fretted with golden fire,' or 'the bright boroughs, the quivering citadels there,' or 'how sweet the moonlight sleeps upon this banke,' that there falls that inexplicable radiance upon the page, and round the very room where the page is read. It has taken more than words to do this; there was an urgency in the poet that brimmed and he could not help it; it overflowed and he was glad. Unless that surge of wonder, that intolerable beating of wings in the poet's mind, had found the right words, we never should have cared. There is poetry in words, much blood in words, but there is a thing that moves behind them, a spirit that puts them on like a garment and wears them, filling the infinite possibilities of their drapery with a body that lives and moves, and goes up and down to delight us with its grace and stir us with its vigor.

It is the sum of what the poet teaches himself that determines his quality. In the midst of external activity, he may, like Yeats rehearsing a play, suddenly perceive that 'tragedy must always be a drowning and breaking of the dykes that separate man from man'; or gradually come to place, like George Moore, the capacity for revision of the written page above all the virtues. All this and much more is hidden behind the greatness of the poetry we read, and has added its beam to the light. The poet may have learned Mozart's lesson, that 'when I am feeling well and in good humor, thoughts come in swarms and with marvelous ease,' or it may be that, as an artist, those are not at all the conditions for getting things done. Analogies may teach him, if he has the eyes for them, like the one Hazlitt drew between the writer and the Indian jugglers of knives. Or he may discover, because of his knowledge of the poetry of the past, that one of his contemporaries, by adapting, accepting, exaggerating old methods, has fashioned and used a new one.

Failure teaches him that all failure in the arts may possibly be mended in the next attempt. Praise teaches him, perhaps, how imperfectly he has transmitted himself, so unpredictable and often so absurd praise is. All pronounce-

ments on style, by poets of his own generation or those of years ago, help him to shape the idea of his own, for he knows that his style must be his own or nothing. He learns, by experiences he would hardly care to tell about, what medicine cures or eases an unwillingness to make an imaginative effort. The weather of his mind is an affair of low pressure areas and sudden storms that he must learn to predict with unfailing accuracy. He watches the least stirring of leaves that indicates a rising wind, and he knows what planets draw his tides. He supports the findings of an almost instrumental skill in self-knowledge of this kind with an old native wisdom of intuition and shrewd speculation. Time concerns him, that he may not waste it; no waking day is ever quite long enough for creation. And at last he learns what all great artists know, each in their kind: to hold to a single ruthlessness of purpose, and that purpose poetry.

Any description of the poet as human being must underline his inclusiveness and his intensity; and it is easy to translate that truth into the part truth that this means an abundance of all that is good and happy and affirmative. But when Walt Whitman said that he, too, 'knitted the old knot of contrariety, had guile, lust, hot wishes I dared not speak, was wayward, vain, greedy, shallow,' he gave evidence of one extreme. But there was also Keats, 'happy as a man may be . . . with the yearning passion I have for the beautiful, connected and made one with the ambition of my intellect'; and there is William Butler Yeats, in one mood 'blest by everything, everything I look upon is blest,' and in another, 'timid, entangled, empty, and abashed.'

T. W. H. Crosland helps the variety with the 'furious wise will and heart of stone,' and D. H. Lawrence with his cry of 'My great religion is a belief in the blood!' Sir Thomas Browne had 'all Africa and her prodigies' in him. Conrad Aiken bids us 'laugh with fool's delight that heavenly folly made the world so bright'; Bliss Perry reminds us that the poet has always been *genus irritabile*—the irritable kind; John Donne must have the soul descend to affections and to faculties, 'else a great Prince in prison lies'; and Shakespeare marks bitterly 'the expense of spirit in a waste of shame.' John Masefield remembers, as most poets do, that 'man with his burning soul has but an hour of breath'; Emerson walks across Cambridge Common, 'glad almost to the brink of fear'; Katherine Mansfield in the grimness of grief writes in her journal, 'To-day I am hardening my heart. I am walking all around my heart and building up the defenses'; and Keats feels 'an awful warmth about my heart like a load of immortality.'

And yet all these are not a fraction of the poet's capacity for life. There was Milton, who knew the courts of heaven, and Villon, who knew the alleys of Paris. Chaucer rode down to Canterbury with priests, shipmen, millers,

knights, and nuns; George Herbert lived in the retirement of a country parish and his mother's house. Blake was mad (or was he sane?) and Alexander Pope was very sane.

'Not only poems, but songs, snatches and raptures of a flaming spirit,' said a seventeenth-century writer, of the psalms of David. It is the heat of the blood that differentiates the poet. It was clever of Oscar Wilde to say that several drinks of whiskey can induce an effect very similar to intoxication. But in one of the mightiest of short English poems James Thomson says, 'he reeleth with his own heart, that great rich vine.'

It is not an accident that the poet is articulate; for sometimes one feels that writers of all kinds have an unearned advantage over the rest of the world because they can get a hearing for their pains and joys, as if no one else felt at all. But the special quality of the poet includes the involuntary voice. With such a necessity laid upon him, seeing as he does the golden outline that defines people standing between one's self and the low sun, he may not silence the vivid sense of life in him. It beats and surges into words. The sum and total of the words may be only a declaration of being, an emphatic *I AM*: the world was thus when I was in it—active, growing, decaying, complex, passionate, pitiful, miraculous. It is simply that a current passes through his body; sometimes it convulses him with its enormous voltage, but more often he is a good conductor, pure metal, and passes on the flow of life to later times and other men.

For people who are afraid of the life in the wires, poetry is dangerous to read. Because the drift of days seldom makes the average man shiver and glow with a sudden shock of life, he feels in the unusual behavior of the poet something deplorable and not quite brave, because it is unusual. The average man has also had unpleasant experience of the poet of mixed and baser metal, the imperfect conductor of the current. But the real poet is the norm for mankind; in his quality of living, the man all would wish to be. It is T. W. H. Crosland who reminds us of the old falsehood to the effect that a writer of poems, especially of sonnets, is a person in precarious health, or of abnormal behavior. But, he says, as a matter of fact, the great poets 'are not only the sanest people in the world, but physically and temperamentally the toughest.' How could this not be so? Men and women weak in body and nerves burn out after a little of the current. But in the great spirits, Shakespeare, Goethe, Whitman, Yeats, there is a calmness, and a confident strength. They are in accord with the force flowing through them; there is room enough in them, and no obstructions.

But all metaphors are a view from one side. To speak of poets as good

conductors is to imply passive reception and release; the figure is not the whole truth. This is because the poet also imparts a special quality to the life flowing through him, so that it is changed by the passage. One element of this change is the new rhythm he gives to the stream of life. Each poet is tuned to a different pitch, not necessarily higher or lower, but more intense than another, or less so in a special way. It has been his study to discover his inner rhythm, and to make himself a resonant instrument for its music. All life that enters his perception beats thereafter to that unmistakable vibration.

Another and essential element of the change in the life the poet feels is his powerful affection for it. Proust, though not a versifier, transmitted his sense of life colored by love that dwells in every scene, on every hour, reluctant to be called away even to the next hour and the following episode. The poet knows that loving particularity. James Stephens says the poet makes grief beautiful—'caring for grief he cares his grief away.' It may be, too, that sharp sense of the appalling limits of time is what makes the poet wish to linger—'the lyf so short,' as Chaucer knew. But after all, the poet is one who, because he feels in the air time rushing by, knows more than most men about it, and has power over it. He can stop time. By his passionately scrupulous examination of one moment, he can re-create it as it is and let it go. Nothing is ever lost, no experience is ever in vain.

And the poet, who can free all men as well as himself from time, loves what he writes of, and writes of what he loves. If he protests, if he mourns, if he hates, and writes about that, love is not far; it is that powerful affection thwarted of which he speaks. And to a certain extent he loves the hateful thing, if only it has life in it. 'As to the poetic character itself,' wrote Keats in a letter, 'it lives in gusto, be it foul or fair, high or low, rich or poor, mean or elevated—it has as much delight in conceiving an Iago as an Imogen.'

In containing and changing the flow of life, the artist who is a poet has enemies and allies, some within himself, and some, the least important, outside himself. The indifferent, the stubborn, the willfully blind, never cease to reproduce themselves in the world, and they are the enemies of art. But the temptation to publish what will satisfy nearly everyone, and not, in his own heart, himself, is the poet's more immediate adversary. Time is always a potential enemy. In merciless and unforeseen ways Time destroys all but the most honest poetry. Yet victory over the temptation to haste can conquer both indifference and Time.

Sudden inspiration, bringing completion of the poem, is a treacherous friend, for it glosses the surface with what seems to be the light of poetry. But the light fades, and the workmanship loosens in its joints, and the poem that

creation without toil had fashioned falls apart. Or the waste of emptiness may threaten; but here, as Ben Jonson says, 'the mind is like a bow, the stronger by being unbent.' Infertile hours are not failure or defeat, but a part of the process of writing, a process that has, like green things growing, spaces of rest. Danger may come in an excess of loyalty to some one method, or poet, or audience, till proportion is destroyed. The complex pull of affections, habits, duties, or pleasures in one's life as a private citizen may also distort artistry; since these things go very deep into existence, one or another is sometimes the most corruptive enemy of all, having place and power within and without. It is an expensive but important chapter in the poet's history that tells how he learned to adjust his poetic to his private life, and both to his life in public. It is a story of the unfailing renewal of an exact balance between the three.

His allies in self-preservation are his self-respect as an artist, the attraction of the goal still before him, and the height of his old vows. Knowledge of life and of all poetry is obviously a loyal part of his forces. Mastery of his creative power is something he has learned slowly and thoroughly, and can usually summon to the endeavor, and control. In composition his allies serve with a vital allegiance, but not always with their presence when it is most fervently asked. Health and peace of mind are his allies, or lacking them, the drive of such a necessity from within that the writing gets done, but this is costly. The support of the subconscious mind, while powerful, is unpredictable. In the crisis a memory of things he had forgotten may rush in, and a knowledge of things he had never learned. But the subconscious mind may not add its final impetus at all, and it may desert at the time when it is most needed and used.

The object of all this complex and endless study, all this tireless application to the acquisition of knowledge of himself, of life, of the genius of language, is to write poetry. The poet wants that poetry to be an exact representation of his own peculiar inner rhythm, and that rhythm so confirmed and set free that it will sound its own note, original and significant, in the poetry of his age. And who will know whether or not he has succeeded? He will know. That is his greatest satisfaction, even though he may have found readers who have been pleased and moved by poetry he has written ever since before he knew what poetry really was. He knows, too, that other poets will know. He has learned to value most the praise of equals, and next the confidence of living men. To those of his contemporaries whose sense of life he has enriched he is grateful for their attendance on his work, and he is fulfilled by it. As an artist he wants approval by his kind. 'The oration is to the orator,' said Whitman, 'the acting is to the actor and actress, not to the

audience.' The poet values their response because they understand as artists, not only the finished thing, but the rigors of devotion to the art.

Wherever the poet stands, the hills and houses and the thinking of mankind centre on him like the spokes of a wheel or the threads of a spider's web. He looks out in every direction with as fresh an excitement as if the world had never been thrust upon the eyes of man till then. This is a mad conviction, but it is the key to the mystery of the universe, what Goethe calls the 'open secret,' open to all, seen by almost none. It never occurs to him not to dare to say what he sees and feels; to him it is an overwhelming wonder that he is there at all, and it seems only natural that, so placed, he should communicate his astonishment and delight. This confidence is an element of genius, but every poet shares it. He feels a kind of godhead; not egotistic assumption, but the fullness of life and his nearness to the source. In vision he has time and space for latitude, as well as such intense apprehension that the commonplace is miraculous and the near-at-hand a wonder fetched home for his pleasure. Whenever the scale of things seems meagre to him, because the gods were tired, or daylight not illumination enough, he heightens through his own creativeness the proportions, and he focuses a single beam of light which the sun will not dim by its going down. When natural music is faint to the ears of mankind, the poet magnifies it. Gaps in the created order are his to fill, and the future, however impenetrable a curtain it seems to drop between it and ourselves, is his to prophesy. To do these things, to sharpen, to reënforce, to heighten, to prophesy, is to exercise his highest power, that of creator.

ART FOR OUR SAKE¹

Charles W. Ferguson

Now that the surrealist and dada exhibit has made the rounds, it is time to speak plainly of the sad estate to which the national mind seems in imminent danger of falling. For the fact which bludgeons one who confronts surrealism and allied whimsies is not that men will paint such pictures and fashion such objects, but that the common fellow of our time, holding no passion for art and less for the abstract, should patronize the transcontinental jaunt of the exhibit and, if not exactly genuflect, at least confess upon emerging from the menage of phantasmagoric objects that he has been touched.

I went, somewhat painfully, to the show in Manhattan. There I beheld four floors overflowing with disembodied ash cans and populated with an assortment of impressed beholders who had come to scoff and remained sheepishly to grin. Eavesdropping, I caught gasps as well as snickers and I discovered that objects which seemed hardly more than giant typographical errors had hooked the fancy of not a few from all walks of life. One young woman told me that, whereas she could not admire the collection, she did feel a certain exhilaration.

In talking later with others who had attended the show, I got a hint of bated breath—a humility which does not seem to embarrass us on other topics. I heard capable artists admit, not waggishly, but in sober earnest, that some of the stuff on exhibit was beyond their depth.

Thus the incomprehensible has acquired followers and the revolt against meaning is in full cry. While this fact is essentially funny, it is likewise important. No matter how much one smiles at the spectacle of men enthralled by ten-cent mysteries, one must not miss the point: The confusion, mental and emotional, of the average person has become so pronounced and terrifying that he seeks outside support and validation of it. Confronting an unassimilable body of facts, the modern mind retreats comfortably into gibberish, substitutes an entertaining brand of madness for effort, and is delighted to find that its mistakes can be dignified by the term art.

If this interpretation seems far-fetched, one need only have his memory refreshed on the salient gewgaws exhibited. Or, for that matter, he may dip again into the blotto works of those who started it all. One of Gertrude Stein's poems begins:

Sweet sweet sweet sweet sweet tea.
Susie Asado.

¹From *Harper's Magazine*, July, 1937.

The young Roumanian Jew who was the founder of dadaism issued the following manifesto: "We want works straightforward, strong, accurate, and forever not understood. Logic is a complication." Started in France, dada societies sprang up in Germany and elsewhere. There were public meetings, spectacular and rousing speeches. A young artist spilled an irregular blot of ink on a sheet of white paper and called it *The Virgin Mary*. Here is one of the founder's poems:

A e ou o youyouyou i e ou o
 youyouyou
 drrrr drrr drrr grrr grrr grrrrrr
 bit of green duration flutter
 in my room
 a e x o i i i e a ou ii ii belly
 shows the center I want to take it
 ambran bran bran and restore
 center of the four
 beng bong beng bang

Now come with me to the most recent display of the extremists. Here is a small birdcage filled with block sugar somewhat the worse for wear. And what is this object? The caption, if that will help you any, is "Why Not Sneeze?" Turn from this to an overpowering piece of wood some six feet high and three feet across, carved roughly in the manner of a hallowe'en prank. Upon the surface of the wood you find, if you take the pains and stand before it long enough, the following objects, among others: a black bow tie, two baby shoes, an old discarded umbrella, a toothbrush, a bustle, a bottle top, a typewriter ribbon, the lid of a garbage pail, a pencil, cigar butts, and all the other ill-assorted items one might uncover if one cleaned the garage, his desk, and the attic on the same day. The objects are not arranged with any view to symmetry but are fastened in such places as might appear to be handy.

These works are not singular oddities in a chamber of horrors but tolerably representative of the whole eerie collection. To be sure, there are others which range closer to the norm, if any conception of the norm remains after a glance round the walls. There is a felicitous picture of a piece of cold ham on a cold plate flanked by a bottle of wine, and the ham has a glassy eye in the center of it. There is a picture of a buxom and obtuse woman seated stolidly on a horsehair sofa in the middle of a luxuriant jungle, the foliage of which barely conceals the smug and uninterested countenances of two toothless and amiable lions. There is a fur-bearing cup and saucer. And on another floor there are the almost conventional paintings of Dali, one of which shows a

woman of lovely shape filled with drawers, some half-empty and all carrying the assorted objects of the boudoir.

The same kind of performance goes on apace to-day in the realm of dissonant music, unpunctuated and occult verse, stream-of-unconsciousness novels. A not inconsiderable crowd of those whose high business it is to interpret the impulses and emotions of our times have seen fit to do so in terms of studied nonsense. Indeed, deference for the meaningless has even found its way into modern education, so that when a child draws a picture of a frog and it resembles a tumor, it is not good form to chide the child. It's a frog to him and it behooves you to see it as he does. There is no longer any simple conviction that a frog is a frog.

Can it be said that there is something too deep to plumb in all this? Not at all. Paul Jordan Smith, the critic, gave the lie to such a notion when, largely to deride the neo-artists, he executed several years ago a magnificent series of hoaxes under a gaga pseudonym. These he caused to be shown and lauded throughout the civilized world as authentic pictures in the modernist manner. Moguls and public fell as heartily for his dazzling travesties as they have since for the more genuine but not less outrageous works of the new masters. A fake is as good as the true in the latterday art with its hallmark of incoherence. The whole array of modern objets d'art have meaning chiefly because they are meaningless.

Not long ago I found myself going down a village street with two things in mind. One was a Mickey-Mouse-Merry-Go-Round and the other was hepicoeum compound. When the average mind comes to entertain in a single instant two such extraneous concepts it is not remarkable that it should find some meaning in a picture which showed a stovepipe playing the piano and brushing its teeth with a Christmas tree. If you dare, you can freeze your thoughts at any one instant during the day and find a menagerie of ideas and objects not a whit less preposterous than you will see at a prize-winning dada show.

This is true in part because of the increasing multitude of objects which in this day and time assail our conscious mind and—to a regrettable degree—enter it. Added to this are such bewildering items as trade indices, extra-territoriality, nationalism, reprisals, sanctions, balance of trade, bonded indebtedness, international law, and other properties of the modern setting that at best make only a slight sense to the average person.

We come to live more and more by symbols and to deal with objects that are several paces removed from our understanding. Faced with a jungle of things, haunted by peering eyes of uncertainty, we assume that all these objects and symbols, in their disheveled state, have significance to us. But when we

try to assert their significance we talk foolishness, and this is precisely what the new art and the newer literature tend to do.

The artist of course ought to occupy a singular position—one not far removed from the priest. It is his function, though he seldom admits it, to reveal what is significant and to play into obscurity what is not. That is why it seems to me that the more cockeyed forms of modern art do us common people such a profound disservice. We know well enough that the life we lead every day tends to become distracted. We have reason to expect from the artist some god-like resolution of order out of chaos. We may at moments be grateful if he reveals mercilessly the contents of our minds. He may even do good deeds with this method, giving body to the abstract. In the main though the artist needs—as we need—to select, not to choose willy-nilly from the garbled contents of our daily ash heap. These dadaists and the frightfulimps who slavishly follow their lack of pattern teach us indiscriminateness, a feeling that one thing is as good as another and that the aggregate is appalling.

In a world less distraught there would be less cause to regret that the artist is inclined to forsake his last. The modern vogue of the monstrous though is more than a pastime. It has the intent and thrust of drama. Nay, more, it has the shadowy compulsion of a religion. It is a kind of worship in a creepy cathedral peopled by the authoritatively insane. The droning chant of half-formed, jumbled words breaking now and then into the cry of a distant loon; the sight of unsightly objects where the statues of saints ought to be; the explosive, industrial cacophony of music without melody; the audience, spectral and agape, yapping its approval: these are not the pyrotechnics of exhibitionism but the dreadful *Te Deum* of men beset by furies.

If you can imagine coming out of the night for solace into such a service, you can understand what the common run of us experience when we confront this sort of modern art. We find no relief save the momentary one of knowing that others are muddled too. We get none of the transfiguration which ideas should bring.

And the great pity of this is that now more than ever the arts are the property of us all. For the first time they are in a position to serve as evangels of perfection, touching millions that they have not touched before. Hence the high importance and obligation of those who give art expression.

To blame the artist solely of course is only to evade the issue for ourselves. The schizophrenic craftsman is no more responsible for imbalance than a riveter is for noise. The new art merely echoes the jangle of our age. It is but a sign of the centrifugal forces at work. The aberrant artists have not created a promiscuity of values. Their fault is only that they do nothing to

clear up our ghastly bewilderment but rather, if taken seriously and accorded continued obeisance, tend to make it intolerable.

What we, the people, ask of the artist is no more than we must do ourselves. The world is so full of a number of things that we need now to be saved, or to save ourselves, from multiplicity. Schiller said you could tell an artist by what he leaves out. Let art forsake its function of selectiveness, and the task is thrown squarely back on us. We must have some toughness of mind if we are to avoid losing all semblance of character and stamina in an age of confusion. We must select and concentrate on that which is significant. This is the high command which art could give to us. Even if it does not supply this we can at least ask it not to attach pseudo-meaning through artistry and cunning to that which we know is grotesque.

WHAT MAKES A BOOK GREAT?¹

Some Notes on the Heroic Principle in Literature

Grant C. Knight

RECENTLY, one of the most energetic of our critics, addressing an assembly of scholars, bookmen, and teachers, declared that there is neither logic nor experience to support the belief that books must be written in a given way, or that they must contain special sentiments.

It was a persuasive thesis but it must have left many a critic, many a teacher and book reviewer uncomfortable, for its implications led straight to the doctrine of critical pluralism, to the assertion that in the matter of assessing the value of a book one man's opinion is as good as another's. Thus it raised again that old and very vexing question of the absolute. Are there, after all, no objective standards by which the greatness of a work of literature can be measured? Can a book be written in any kind of way, about any kind of theme, and still be recommended to the future? Can the would-be critic safely laud or condemn a contemporary volume without being charged with irresponsible bias and prejudice?

These questions are not mere academic ones. In the most real and practical sense they involve the self-respect, the authority of all persons who interpret literature, and they interest all lay readers who do not wish to squander their time. Any conscientious individual entrusted with the guid-

¹From *The Saturday Review of Literature*, July 14, 1945. Used by permission of the author.

ance of a reading public must wish to be able without too much dogmatism or mysticism to say precisely why one book is more likely to survive than its fellows are. And as he reflects upon the reasoned and eloquent treatises on literary criticism, as he remembers all the rhetorical terms and controversies they evoked, he cannot but marvel that so much labor should have been expended to bring about so little conviction. When critics of the caliber of Oscar Cargill and Alfred Kazin differ pointedly about the merits of *For Whom the Bell Tolls*, whom and what should one believe? Can anyone say with confidence that Steinbeck's *The Grapes of Wrath* will be respected a century hence?

In one of his later essays, Stuart Sherman remarked that the best criticism is of a concrete and inductive habit. This is so suggestive a reflection that it is strange that no one, not even Mr. Sherman, put it to the use to which it lends itself. For since greatness is an historical phenomenon a disinterested critic should be able from an examination of the books accepted as great to isolate the quality or qualities, the "special sentiments," if there are any, which gave them distinction. Such an analysis will uncover one or two logical hazards which will be noted, but despite all dangers it should come pretty close to discovering for us a touchstone by which contemporary literature may be tested.

Even the most amateurish book reviewer cannot be ignorant of those titles which generations have associated with greatness; if he wishes to refresh his memory he will find no lack of compilations of "the hundred best books" in his town library. It is true that these rolls of honor may illustrate the operation of what Matthew Arnold called the historic fallacy, but the fact remains that in their general agreement such lists supply the only data upon which we may reason and that the only alternative to such reasoning is critical anarchy.

Suppose that in our search for the concrete we select from a composite of such lists a recent volume for examination, and that our choice falls on Knut Hamsun's *Growth of the Soil*. Upon rereading it we are certain to respond to this story of simple, courageous lives as we did years ago, to find in it a rational, realistic exaltation of the human creature. In what they do and say Isak and Inger display that unmoved front to adversity which persuades us all that the human race is in the long run undefeatable and which banishes from ourselves much shrinking and self-pity. Their tale is one which we immediately recognize as profoundly healthful and heroic. It is one which the world will not forget because it furnishes one of the most precious of all qualities, inspiration—that breathing into our hearts of fortitude and the will to be free. Its triumph is that it builds a spiritual foundation for our house of days.

Can the functioning of this heroic principle explain to any degree the selection of those books which critics and public have united to hail above all others? Can it account in whole or in large part for the reputation of such diverse writings as the Greek epics, the Book of Job, the somber visions of Dante, the adventures of Pantagruel and Gargantua, *Paradise Lost*, Goethe's *Faust*, *Les Misérables*, *Leaves of Grass*, the abysmal novels of Dostoevsky, and the futlitarian ones of Thomas Hardy? Can it be seen, from a point of view that is as objective as it is possible to make it, that this principle provides the means for assembling into a practicable homogeneity books which otherwise agree little in style and theme and tone and incident?

Evidently an affirmative answer can be given when we consider only epic poetry; the folk poems which recount the exploits of Achilles and Ulysses, of Beowulf and Siegfried and Roland clearly embody the heroic principle in literature. They did not persist because they were eventually recorded in the Greek alphabet, or because they supply a guidebook to the customs of early Teutons, or because they recite a good story; they have defeated time because they call upon us to admire the strength in man which is more than human, because they assert that the race can transcend its physical limits.

It is no difficult transition from the epics to the Bible, which has survived as a precious book because it unfolds a majestic plan for human salvation, prepared for in the Old Testament and made incarnate in the New. *The Divine Comedy* is also of this class, more sophisticated than the ancient poems but offering the example of spiritual heroism and a belief in ultimate beatification. *Paradise Lost* is not the greatest English epic because it contains an unscientific cosmogony or an outmoded conception of life in the hereafter, not entirely because of its gravely splendid blank verse, and not alone because of its Scriptural theme. Instead, *Paradise Lost* owes most of its long fame to its prophecy of the coming of a Savior. *Faust* likewise treats of the theme of redemption and consoles us with a protagonist who, aspiring and errant in the manner of all men, reached that redemption through the common sins.

The theme of salvation gained through the commission of evil also motivated *Les Misérables*, which, with all its garrulousness and sentimentality, is also a great book—great in its recognition of the striving of mankind toward the good. This declaration of the god in man, is it not that which made Emerson and Thoreau and Whitman heralds of a golden day in America? Emerson whose rather bleak biography can be forgotten when we remember that he restored divinity to the inhabitants of New England? Thoreau, Emerson's Man Thinking in the flesh, who stripped himself to the essentials and stood alone against the sky? Whitman, whose vision of world-wide democracy shames us for our faltering march toward its realization?

But what of such variants as the not seldom obscene ramblings of Doctor François Rabelais, and what of *Crime and Punishment* and *Jude the Obscure*? What of the despair of God's man, Job? Can Swift, Dickens, Conrad be said to have invoked the heroic principle?

Upon first consideration it may seem that some of these writers and books are anything but heroic, that they have stature but not that immensely tonic quality found in the literature hitherto mentioned. Yet scan them more closely. Rabelais, too, is large of heart; he, too, magnifies human nature; but his method is that of purging us of stupid inhibitions, of making our sensual life a thing of infinite gusto and variety. He laughed at humanity because he loved it in all its manifestations, the carnal not the least. And so he cleanses us, leaves us amused by our timidities, our protective etiquette, our impulse to deprecate our flesh.

Dickens is great for an allied reason of sensuality: he gives us the warming pledge that living is good, that food and drink and neighborliness are to be enjoyed. In a panorama of metropolitan society he did not ignore iniquity and hypocrisy and cruelty, but he overbalanced them with the sureness that people are growing into kindness and the recognition of responsibility for each other. His buoyancy, his delight in all but the coarse animal habits, his charity, his trumpeting of social abuses make Dickens, indeed, one of the foremost writers. As for Conrad, he often sends his heroes down to death and what looks like defeat. But they are not actually vanquished. The moral of his novels is that man can arrive at victory through being overcome, that one can save his life by losing it.

Thomas Hardy's men and women are also likely to belong to the legion of the conquered, but because their creator denied to their struggle any root in a large meaning and purpose they lack the highest nobility, and the scrupulous critic may as well concede that Hardy's novels, taken singly, are notable exceptions to the validity of the heroic principle. If that critic be inclined to sophistry he may argue that Hardy, pessimistic as he seems, insisted that he was a meliorist, or he may go on to say that it is not *Jude the Obscure* or *Tess* but Hardy's novels in the aggregate that attain greatness. Or he may even argue that not Hardy's novels but Hardy the man should be termed great. For the Englishman's masterworks are full of faults. His style, if it does not deserve George Moore's sneer of "dishwater," is a tool that often breaks in the author's hand; his plots wander into melodrama and an incredible train of coincidences; his characters are squeezed under his thumb. Perhaps here is an instance in which the whole exceeds the sum of the parts, for Hardy the man, rather than Hardy the artist, can always be respected for his defiance of the greatest of all tyrannies.

Dostoevsky surpasses Hardy in sensitivity to pain and aberration, but the reader discovers that the Russian's dissection of personalities, patient and pitiless and frightening as it is, has its source not in contempt but in the desire to comprehend and to forgive all and to refer to man that dignity which comes through sorrow bravely endured. He did not end *Crime and Punishment* in a desperate mood. On the contrary, the last paragraphs of that novel are as confident as Emerson was that darkness is but the prelude to light.

Job and *Hamlet* also make use of the heroic principle. The older drama pits man against his god, puts into his mouth the immemorial query as to why the righteous are not spared a chastisement which fits the guilty, and ascribes to its protagonist a sense of justice not vouchsafed to his deity. The second drama revolves around a prince who, far from being a weakling, becomes the master of a neuroticism which had been engendered by disillusionment. *Hamlet* is heroic because notwithstanding some adolescent melancholy it sweeps self-pity from our minds and leaves us with the confidence that though man's body be broken his spirit need not be overcome. Hamlet, fatally wounded, still gives the universe an affirmation; his last care is that truth may prevail.

To observe the functioning of the heroic principle in Swift's essays and fiction may also at first seem difficult, although it may be assumed that not a little of what he wrote will bit by bit be lopped from the tree of English literature. In what is left we shall discern beneath the savagery and loathing a passion for justice, an agony for the race which he affected to despise, an impatient longing to better it, that measure the temper of his heroism. He, too, would have us be Gullivers rather than Lilliputians.

Before a generalization about the prevalence of the heroic principle in great literature can safely be made, two objections must be weighed. One is that some other quality than heroism has made these books great; the other is that the criticism which has fixed these books in their present repute has been mistaken and that the judgment of the future will lower the estimate of old masterpieces.

The first objection is easily disposed of. No more than one look at the titles just named is needed to convince us that they are unlike in style and in narrative or poetic techniques. It can be noted that, while great books are without exception beautiful in what they are, they are not invariably beautiful in the way in which they are written, in the language which constructed their character, for greatness can be independent of beauty as beauty can exist apart from greatness. Rhythm and image and color, suspense and cleverness of plan, even fidelity to truth are not enough; no matter how emotional

the surface of great literature is, it is at bottom intellectual, having used feeling and art to put us into contact with an idea. It may be that our standards of appreciation will so change that we shall reverse the opinions of past critics and strip the laurel leaves from some of the classics. This is not altogether a remote possibility, and the man who is insistent about the position of even such recent authors as Thackeray and George Eliot runs the risk of being smiled at by his children. But the heroic principle will in all probability, because of its supreme utility, continue to inform those books we shall call greatest.

For the instinct of humanity is to be decent and to climb upward to some kind of Celestial City, to propagate the morality which will distribute the greatest good to the largest number. Most people tell the truth most of the time, even without the motive of self-interest; most people believe in fair play and justice and goodness. History, which provides a fearsome chronicle of wars, assassinations, tortures, and treacheries, which justifies a certain amount of cynicism, nevertheless affirms that through all these and a million other catastrophes the human race has gone on resolutely, arriving through the evolution of knowledge and manners at its present hopeful, if precarious, civilization. And history teaches us that one concept of the good has prevailed in many guises, in all lands, at all times: the concept which makes human betterment, human transfiguration in some form or other, the maximum morality.

Our inductive reasoning leads us, therefore, to the conclusion that great literature, by donating health to mind and body, has been utilitarian and moral. We have cherished those books which have upheld the vision of man's emergence from cave and jungle, kindled our wonder at our own mettle, and helped to mold us into a more or less humane gregariousness.

Implicit in this conclusion is the conviction that humanity is neither imbecile nor futile, that its struggle for self-realization has meaning, and that the literature which aligns its force with this endeavor has the best chance to be remembered.

THE TOLERANT EAR¹

Deems Taylor

IF RALPH WALDO EMERSON is not the patron saint of all those who write on controversial subjects, including music, he ought to be. For it was Emerson who invented that God-given line about consistency being "the hobgoblin of little minds." My other favorite author is Walt Whitman, with his "I contradict myself? Very well, I contradict myself"—or words to that effect. All of which is a more—or less—graceful way of leading up to the fact that, having just pleaded for a revival of intolerance in listening to new music, I am about to plead, with equal eloquence, on the other side. In short, while I do feel that a good many of us could afford to be a bit more honest in expressing our musical dislikes, we might, on the other hand, be a little slower in forming them; we ought to be quite sure that we know what it is that we do not like about music that repels us.

Let me get to my text. It is a letter from a radio listener to the Philharmonic-Symphony concerts, and reads, in part, as follows:

I have been listening for many years to the works of the great masters as rendered by the best orchestras on two continents, and think I know a little about good music. But I am unable to appreciate the modern composers. Such music seems to me to be without melody, harmony, or form, and literally gives me a pain. And yet there must be something in it, or the great orchestras would not play this kind of music. What must I listen for? How should I listen? There must be something I have missed, and I am sincere in my desire to know what it is. I am sure there are thousands like myself, asking the same questions. Could you say a few words on this subject sometime? I feel that many of your listeners would be grateful for some advice on this point.

Naturally, I cannot undertake to write an exhaustive and authoritative treatise on *How to Listen to Modern Music*, for the three excellent reasons that I haven't space enough, you haven't patience enough, and I don't know enough. But I might be able to make a few suggestions that would possibly be useful to anyone hearing ultra-modern music for the first time.

First and foremost, when you sit down to a piece of ultra-modern music, try to rid yourself of . . . fear. I make that suggestion in all seriousness. Don't be afraid. It may seem silly to imply that people are frightened by modern music. Just the same, I think they are. A good deal of the fury with which people denounce the new and unfamiliar in art is the result of a very real terror. Let me illustrate.

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When I was a good deal younger than I am now—in fact, when I was four years old—my most precious possession was an iron fire engine drawn by two galloping iron horses. That engine and its horses never left me. It stayed with me through the day and went to bed with me at night. One day, when I was supposedly playing with it, contentedly, my mother came into the room and found me dissolved in tears. After a good deal of questioning she found out what the trouble was. I forget how I worded my explanation, but the gist of it was that I had just realized that when I grew up I wouldn't be able to play with my fire engine any more. She tried to comfort me by assuring me that I could have my engine as long as I liked; that I could play with it even when I was grown up. "But," I said, miserably, "I'm afraid I won't *want* to."

I think that particular fear lies at the root of a great deal of people's unwillingness to give even a first hearing to modern music. It's a sort of "I'm-glad-I-don't-like-lemonade-because-if-I-did-I'd-drink-it-and-hate-it" attitude. How many times I've heard people say, "Well, if *this* is music, what's going to become of Bach and Beethoven and Mozart and Wagner?" We're really afraid of getting to like this new stuff, for fear that it might destroy our taste for the older music that we've known and loved all our lives.

Or, if our reactions are a little less naïve, we have a subconscious—or perhaps conscious—fear that if too many people grow to like this new music the old will lose its popularity, orchestras will stop playing it, singers and instrumentalists will stop putting it on their programs, and we shan't be able to hear the classics any more.

Now granted that you may be haunted by that fear, look about you—or rather, use your ears. Is Bach extinct because Strauss wrote *Ein Heldenleben*? Is Beethoven on the ash-heap because Stravinsky wrote *The Rites of Spring*? Is Wagner no longer heard because Debussy wrote *Pelléas et Mélisande*? Has Brahms been scrapped to make room for Shostakóvich? If the history of the race tells us anything, it tells us that art is not a branch of the automobile industry or the millinery trade. This year's model does not render last year's model obsolete. The music you have always liked will continue to be played. There is no limit to the library of the world's music. There's plenty of room on its shelves for new scores, without throwing out any old ones.

Another thing of which not to be frightened. Don't be too much impressed by what people have to say about how this ultra-modern music marks a complete smashup of all our previous conceptions of what music ought to be, the destruction of all pre-existing laws of melody, harmony, and whatnot. Some of the most repellent characteristics of much modern music have been

in existence for centuries. In the Confucian temples of China, for instance, the priests sing certain prescribed hymns in unison; but every priest is at liberty to choose whatever key is best suited to his voice. That's polytonality. The so-called harmony of the Middle Ages would sound unbearably awkward and ugly to us. There is much talk of twelve-note scales and quarter-tones today. In Hindu music today, as there always has been, there are sixty-three well-defined different scales. So don't get to thinking of this breakup of existing musical theories in terms of the fall of the Roman Empire or the destruction of civilization. It's only the breakup of a lot of rules made up by people who weren't composers. The so-called laws of musical theory are rules of procedure, codified from what composers of the past did more or less instinctively, in order to allow composers of the present to write music that will at least be inoffensive.

Great music can be written that conforms to the strictest rules ever laid down. But the fact that music conforms to the rules is no guarantee that it will be great. Bach and Mozart and Beethoven broke as many rules in their day as Schönberg is breaking in his. Most great composers are aesthetic anarchists; so don't let people scare you by tales of the Red menace. Particularly, don't let us critics frighten you. The people who stand most stubbornly in the way of progress in any art are generally the very people who know most about it. They *know* what rules are being broken, and are correspondingly horrified. The general public likes the new work or doesn't like it, and so keeps it alive or kills it.

Furthermore, if you honestly want to understand this new music, don't pay much attention to what its composers have to say about it. Every artist desires ardently to be understood, and his natural impulse is to burst into words in order to help you see what he is driving at. But music happens to be a language—a very definite language—for the expression of just those ideas and moods and emotions that cannot be expressed in words. So don't trust words. If a piece of music can be completely expressed in words, and the intellectual ideas of which words are the supreme medium, there never was any need to compose it.

And don't wonder what Beethoven or Wagner would have said of it. If what their fellow composers had to say of their music is any criterion, Beethoven and Wagner would loathe it. Don't take the word of the past, no matter how great a past. Ancestor worship does not make for a healthy nation or a healthy art. God help us if the younger generation ever stops being the despair of its grandparents, or turns out no music of which its spiritual ancestors would have thoroughly disapproved.

Another thing. If music means anything to you, if it is a source of pleas-

ure, inspiration, or spiritual nourishment to you, you owe something to music. It is your duty to help to keep it a living, growing art. You must not be selfishly content merely to sit in the shade of the tree. Water it occasionally. The least you can do, as a lover of music, is to be willing to listen to what a new composer has to say, whether you like it or not. People write me despairing letters, pointing out our dearth of great composers, our lack of a Beethoven, a Wagner, or a Brahms. I don't say that that is true or not true. I don't know. But if it is true, at least let us make it possible for the great man to get a hearing when he does arrive. And make no mistake. When he does arrive, many of you will not like him. To some of us at least, Debussy's *Afternoon of a Faun* is one of the loveliest pieces of music ever written. Even those who may not care for it hardly find it ugly or incoherent. Yet at the first performance of the *Faun* there was a riot in the hall. The audience laughed and yelled and hissed and whistled so loudly that the piece went virtually unheard. That was in 1894, less than half a century ago. The human ear is a very adaptable instrument.

"All right," you say, "I'll listen. Now what do I listen for?" That question is not so easy to answer. Or perhaps it is. I think I would say, listen for the same things that you expect to find in any piece of music; but don't make your definitions too rigid. There are four elements that are present in any piece of good music: melody, which is design; harmony, which is color; rhythm, which is proportion; and form, which is the ground plan. Listen for them. Ask yourself, does this music contain themes that possess a definite contour and outline, regardless of whether they happen to please me or not? Do they exist? Granted that its harmonies may offend my ear, is there any element of contrast among them? Is there any discernible difference between one ugly chord and another, or is the general impression of all this cacophony one of monotony? Does the music possess some underlying rhythmic pattern that keeps it going, or does it give the effect of moving in a circle? Does it possess any plan that I can discern, no matter how unfamiliar or unlike the traditional forms? Does it seem to possess a beginning, and middle, and an end, or does it just start and stop?

Now a word of warning about the harmony. Bear in mind that in recent years composers have taken to using strongly dissonant chords very often not as harmony is conventionally used, but to give an effect of color. It is a device that is hard to explain in words. One simple example is the silver-rose theme in Strauss's *Der Rosenkavalier*, where the celesta plays a series of chords that has nothing in common with the harmony of the strings that underlie it. If you're familiar with that theme, you can't deny that the dissonant harmonies give it a silvery, metallic quality that has nothing to do

with the tone quality of the instruments that are playing it. Look for a similar intention in a piece of new music before you decide that the composer was just trying to annoy you with a series of discords.

One thing about form. Music has always been inspired by the mediums through which it is transmitted—in other words, has always been written for whichever medium would give it the most performances. If Haydn and Mozart and Beethoven wrote a great many symphonies and string quartets, one reason is that almost every wealthy man of their times maintained a private orchestra or a private quartet. He would order a new symphony or a new piece of chamber music much as you would order a new overcoat. Today there are no more private orchestras and very few patrons. But one medium that is becoming increasingly hospitable to composers is the theatre. Of fifteen works by modern composers played by the Philharmonic-Symphony Orchestra during the season of 1936-37, only two of them were absolute—that is, abstract—music. Five were program music—told a definite story—and eight had been written for the stage, and particularly for ballets and pantomimes.

Now stage music must base its form, not on a musical structure, but on a dramatic one, which is frequently quite foreign to musical logic. To develop a musical idea clearly and coherently takes a certain amount of time; but when music accompanies a dramatic story, or the gestures of a pantomimist, it must frequently turn in its own length, so to speak, long before it would naturally do so. The consequence is, that when such music is played on a concert stage, without the pantomime or the ballet as a clue to what it is trying to express, it is often likely to sound formless and incoherent. Parts of Stravinsky's *Petrushka* and *The Rites of Spring*, for instance, are almost meaningless without the accompanying stage action. This is no fault of the music; it is the fault of playing the music out of its proper place—exhibiting the costume, so to speak, without bothering to bring on the actor. Bear that handicap in mind when you listen to a new ballet or pantomime in concert form.

And now, having dutifully listened, suppose you still don't like this new music? Hear it again. Give it several hearings, if you possibly can, no matter how much they may hurt. And then, if you are absolutely sure that you really don't like it, or that you really do, don't be afraid to say so. Don't be afraid to be wrong. Don't pretend, either way, out of deference to your friends, or a fear of being thought old-fashioned. Furthermore, if you dislike one ultra-modern work, don't take it for granted that no ultra-modern music is for you. On the other hand, don't assume that every new piece, however outrageous, is the voice of the future. The proportion of rubbish to great

music that is being written today is what it always has been: about ninety per cent.

When we hear two men speaking in a foreign language, if we don't happen to know that language, everything they say sounds like gibberish. Only after we have begun to grasp their language can we decide whether they are talking wisdom or nonsense. Composers today are experimenting with a new musical language. There is as yet no dictionary for it, and no way of studying it except to listen to it without panic and without mental reservations. And the more we listen, the better able shall we be to weigh and estimate the value of what present-day composers are saying. Some of them are just talking pig-Latin; but others may be saying something that we may all, some day, be grateful to hear.

Science

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SALOMON'S HOUSE¹

Francis Bacon

"God bless thee, my son; I will give thee the greatest jewel I have. For I will impart unto thee, for the love of God and men, a relation of the true state of Salomon's House.² Son, to make you know the true state of Salomon's House, I will keep this order. First, I will set forth unto you the end of our foundation. Secondly, the preparations and instruments we have for our works. Thirdly, the several employments and functions whereto our fellows are assigned. And fourthly, the ordinances and rites which we observe.

"This end of our foundation is the knowledge of causes and secret motions of things; and the enlarging of the bounds of human empire, to the effecting of all things possible.

"The preparations and instruments are these. We have large and deep caves of several depths; the deepest are sunk 600 fathoms; and some of them are digged and made under great hills and mountains; so that if you reckon together the depth of the hill and the depth of the cave, they are, some of them, above three miles deep. For we find that the depth of an hill, and the depth of a cave from the flat, is the same thing; both remote alike from the sun and heaven's beams, and from the open air. These caves we call the lower region. And we use them for all coagulations, indurations, refrigerations, and conservations of bodies. We use them likewise for the imitation of natural mines and the producing also of new artificial metals, by compositions and materials which we use and lay there for many years. We use them also sometimes (which may seem strange) for curing of some diseases, and for prolongation of life, in some hermits that choose to live there, well accommodated of all things necessary, and indeed live very long; by whom also we learn many things.

"We have burials in several earths, where we put divers cements, as the Chinese do their porcelain. But we have them in greater variety of composts and soils, for the making of the earth fruitful.

"We have high towers, the highest about half a mile in height, and some of them likewise set upon high mountains, so that the vantage of the hill with the tower is in the highest of them three miles at least. And these places we call the upper region, accounting the air between the high places and the low as a middle region. We use these towers, according to their several heights and situations, for insolation, refrigeration, conservation, and for the view

¹From *The New Atlantis* by Francis Bacon (1626).

²This was the name given to the ideal order of society in Bacon's *The New Atlantis*.

of divers meteors—as winds, rain, snow, hail; and some of the fiery meteors also. And upon them, in some places, are dwellings of hermits, whom we visit sometimes, and instruct what to observe.

“We have great lakes, both salt and fresh, whereof we have use for the fish and fowl. We use them also for burials of some natural bodies, for we find a difference in things buried on earth or in the air below the earth, and things buried in water. We have also pools, of which some do strain fresh water out of salt, and others by art do turn fresh water into salt. We have also some rocks in the midst of the sea, and some bays upon the shore for some works, wherein is required the air and vapour of the sea. We have likewise violent streams and cataracts, which serve us for many motions; and likewise engines for multiplying and enforcing of winds to set also on going divers motions.

“We have also a number of artificial wells and fountains, made in imitation of the natural sources and baths, as tinted upon vitriol, sulphur, steel, brass, lead, nitre, and other minerals; and again, we have little wells for infusions of many things, where the waters take the virtue quicker and better than in vessels or basins. And amongst them we have a water, which we call water of Paradise, being by that we do to it made very sovereign for health and prolongation of life.

“We have also great and spacious houses, where we imitate and demonstrate meteors—as snow, hail, rain, some artificial rains of bodies and not of water, thunders, lightnings; also generations of bodies in air—as frogs, flies, and divers others.

“We have also certain chambers, which we call chambers of health, where we qualify the air as we think good and proper for the cure of divers diseases and preservation of health.

“We have also fair and large baths, of several mixtures, for the cure of diseases and the restoring of man’s body from arefaction; and others for the confirming of it in strength of sinews, vital parts, and the very juice and substance of the body.

“We have also large and various orchards and gardens, wherein we do not so much respect beauty as variety of ground and soil, proper for divers trees and herbs, and some very spacious, where trees and berries are set, whereof we made divers kinds of drinks, besides the vineyards. In these we practise likewise all conclusions of grafting and inoculating, as well of wild trees as fruit-trees, which produceth many effects. And we make by art, in the same orchards and gardens, trees and flowers, to come earlier or later than their seasons, and to come up and bear more speedily than by their natural course they do. We make them also by art greater much than their nature;

and their fruit greater and sweeter, and of differing taste, smell, colour, and figure, from their nature. And many of them we so order, as that they become of medicinal use.

"We have also means to make divers plants rise by mixtures of earths without seeds, and likewise to make divers new plants, differing from the vulgar, and to make one tree or plant turn into another.

"We have also parks, and enclosures of all sorts, of beasts and birds; which we use not only for view or rareness, but likewise for dissections and trials, that thereby we may take light what may be wrought upon the body of man. Wherein we find many strange effects: as continuing life in them, though divers parts, which you account vital, be perished and taken forth; resuscitating of some that seem dead in appearance, and the like. We try also all poisons and other medicines upon them, as well of chirurgery as physic. By art likewise we make them greater or smaller than their kind is, and contrariwise dwarf them and stay their growth; we make them more fruitful and bearing than their kind is, and contrariwise barren and not generative. Also we make them differ in colour, shape, activity, many ways. We find means to make commixtures and copulations of divers kinds, which have produced many new kinds, and them not barren, as the general opinion is. We make a number of kinds of serpents, worms, flies, fishes, of putrefaction, whereof some are advanced (in effect) to be perfect creatures, like beasts or birds, and have sexes, and do propagate. Neither do we this by chance, but we know beforehand of what matter and commixture what kind of those creatures will arise.

"We have also particular pools where we make trials upon fishes, as we have said before of beasts and birds.

"We have also places for breed and generation of those kinds of worms and flies which are of special use; such as are with you your silkworms and bees.

"I will not hold you long with recounting of our brewhouses, bakehouses, and kitchens, where are made divers drinks, breads, and meats, rare and of special effects. Wines we have of grapes, and drinks of other juice, of fruits, of grains, and of roots, and of mixtures with honey, sugar, manna, and fruits dried and decocted; also of the tears or woundings of trees, and of the pulp of canes. And these drinks are of several ages, some to the age or last of forty years. We have drinks also brewed with several herbs, and roots, and spices; yea, with several fleshs, and white meats; whereof some of the drinks are such as they are in effect meat and drink both, so that divers, especially in age, do desire to live with them with little or no meat or bread. And above all we strive to have drinks of extreme thin parts, to insinuate into the body,

and yet without all biting, sharpness, or fretting; insomuch as some of them, put upon the back of your hand, will with a little stay pass through to the palm, and yet taste mild to the mouth. We have also waters, which we ripen in that fashion, as they become nourishing, so that they are indeed excellent drink, and many will use no other. Breads we have of several grains, roots, and kernels; yea, and some of flesh and fish dried; with divers kinds of leavenings and seasonings; so that some do extremely move appetites, some do nourish so as divers do live of them, without any other meat, who live very long. So for meats, we have some of them so beaten, and made tender, and mortified, yet without all corrupting, as a weak heat of the stomach will turn them into good chylus, as well as a strong heat would meat otherwise prepared. We have some meats also and bread and drinks, which taken by men, enable them to fast long after; and some other, that, used, make the very flesh of men's bodies sensibly more hard and tough, and their strength far greater than otherwise it would be.

"We have dispensatories or shops of medicines; wherein you may easily think, if we have such variety of plants and living creatures more than you have in Europe (for we know what you have), the simples, drugs, and ingredients of medicines must likewise be in so much the greater variety. We have them likewise of divers ages and long fermentations. And for their preparations, we have not only all manner of exquisite distillations, and separations, and especially by gentle heats and percolations through divers strainers, yea, and substances; but also exact forms of composition, whereby they incorporate almost as they were natural simples.

"We have also divers mechanical arts, which you have not; and stuffs made by them, as papers, linen, silks, tissues, dainty works of feathers of wonderful lustre, excellent dyes, and many others, and shops likewise as well for such as are not brought into vulgar use amongst us, as for those that are. For you must know that, of the things before recited, many of them are grown into use throughout the kingdom; but yet, if they did flow from our invention, we have of them also for patterns and principals.

"We have also furnaces of great diversities, and that keep great diversity of heats; fierce and quick, strong and constant, soft and mild, blown, quiet, dry, moist, and the like. But above all we have heats in imitation of the sun's and heavenly bodies' heats, that pass divers inequalities and as it were orbs, progresses, and returns, whereby we produce admirable effects. Besides, we have heats of dungs, and of bellies and maws of living creatures and of their bloods and bodies, and of hays and herbs laid up moist, of lime unquenched, and such like. Instruments also which generate heat only by motion. And further, places for strong insulations; and again, places under the earth,

which by nature or art yield heat. These divers heats we use as the nature of the operation which we intend requireth.

"We have also perspective houses, where we make demonstrations of all lights and radiations, and of all colours; and out of things uncoloured and transparent we can represent unto you all several colours, not in rainbows, as it is in gems and prisms, but of themselves single. We represent also all multiplications of light, which we carry to great distance, and make so sharp as to discern small points and lines. Also all colorations of light: all delusions and deceits of the sight, in figures, magnitudes, motions, colours; all demonstrations of shadows. We find also divers means, yet unknown to you, of producing of light, originally from divers bodies. We procure means of seeing objects afar off, as in the heaven and remote places; and represent things near as afar off, and things afar off as near; making feigned distances. We have also helps for the sight, far above spectacles and glasses in use; we have also glasses and means to see small and minute bodies perfectly and distinctly; as the shapes and colours of small flies and worms, grains, and flaws in gems which cannot otherwise be seen, observations in urine and blood not otherwise to be seen. We make artificial rainbows, halos, and circles about light. We represent also all manner of reflections, refractions, and multiplications of visual beams of objects.

"We have also precious stones of all kinds, many of them of great beauty and to you unknown; crystals likewise, and glasses of divers kinds; and amongst them some of metals vitrified, and other materials, besides those of which you make glass. Also a number of fossils and imperfect minerals, which you have not. Likewise loadstones of prodigious virtue: and other rare stones, both natural and artificial.

"We have also sound-houses, where we practise and demonstrate all sounds and their generation. We have harmony which you have not, of quarter-sounds and lesser slides of sounds. Divers instruments of music likewise to you unknown, some sweeter than any you have; with bells and rings that are dainty and sweet. We represent small sounds as great and deep, likewise great sounds extenuate and sharp; we make divers tremblings and warblings of sounds, which in their original are entire. We represent and imitate all articulate sounds and letters, and the voices and notes of beasts and birds. We have certain helps which, set to the ear, do further the hearing greatly; we have also divers strange and artificial echoes, reflecting the voice many times, and as it were tossing it; and some that give back the voice louder than it came, some shriller and some deeper; yea, some rendering the voice differing in the letters of articulate sound from that they receive. We have all means to convey sounds in trunks and pipes, in strange lines and distances.

"We have also perfume-houses, wherewith we join also practices of taste. We multiply smells, which may seem strange: we imitate smells, making all smells to breathe out of other mixtures than those that give them. We make divers imitations of taste likewise, so that they will deceive any man's taste. And in this house we contain also a confiture-house, where we make all sweetmeats, dry and moist, and divers pleasant wines, milks, broths, and salads, far in greater variety than you have.

"We have also engine-houses, where are prepared engines and instruments for all sorts of motions. There we imitate and practise to make swifter motions than any you have, either out of your muskets or any engine that you have; and to make them and multiply them more easily and with small force, by wheels and other means, and to make them stronger and more violent than yours are, exceeding your greatest cannons and basilisks. We represent also ordnance and instruments of war and engines of all kinds; and likewise new mixtures and compositions of gunpowder, wildfires burning in water and unquenchable; also fireworks of all variety, both for pleasure and use. We imitate also flights of birds; we have some degrees of flying in the air. We have ships and boats for going under water and brooking of seas, also swimming-girdles and supporters. We have divers curious clocks, and other like motions of return, and some perpetual motions. We imitate also motions of living creatures by images of men, beasts, birds, fishes, and serpents; we have also a great number of other various motions, strange for equality, fineness and subtilty.

"We have also a mathematical-house, where are represented all instruments, as well of geometry as astronomy, exquisitely made.

"We have also houses of deceits of the senses, where we represent all manner of feats of juggling, false apparitions, impostures and illusions, and their fallacies. And surely you will easily believe that we, that have so many things truly natural which induce admiration, could in a world of particulars deceive the senses, if we would disguise those things and labour to make them more miraculous. But we do hate all impostures and lies, insomuch as we have severely forbidden it to all our fellows, under pain of ignominy and fines, that they do not show any natural work or thing adorned or swelling, but only pure as it is, and without all affectation of strangeness.

"These are, my son, the riches of Salomon's House.

"For the several employments and offices of our fellows, we have twelve that sail into foreign countries under the names of other nations (for our own we conceal), who bring us the books and abstracts, and patterns of experiments of all other parts. These we call merchants of light.

"We have three that collect the experiments which are in all books. These we call depredators.

"We have three that collect the experiments of all mechanical arts, and also of liberal sciences, and also of practices which are not brought into arts. These we call mystery-men.

"We have three that try new experiments, such as themselves think good. These we call pioneers or miners.

"We have three that draw the experiments of the former four into titles and tables, to give the better light for the drawing of observations and axioms out of them. These we call compilers. We have three that bend themselves, looking into the experiments of their fellows, and cast about how to draw out of them things of use and practice for men's life and knowledge, as well for works as for plain demonstration of causes, means of natural divinations, and the easy and clear discovery of the virtue and parts of bodies. These we call dowsymen or benefactors.

"Then, after divers meetings and consults of our whole number, to consider of the former labours and collections, we have three that take care out of them to direct new experiments, of a higher light, more penetrating into Nature than the former. These we call lamps.

"We have three others that do execute the experiments so directed, and report them. These we call inoculators.

"Lastly, we have three that raise the former discoveries by experiments into greater observations, axioms, and aphorisms. These we call interpreters of Nature.

"We have also, as you must think, novices and apprentices, that the succession of the former employed men do not fail; besides a great number of servants and attendants, men and women. And this we do also: we have consultations, which of the inventions and experiences which we have discovered shall be published, and which not: and take all an oath of secrecy for the concealing of those which we think fit to keep secret: though some of those we do reveal sometimes to the State, and some not.

"For our ordinances and rites we have two very long and fair galleries: in one of these we place patterns and samples of all manner of the more rare and excellent inventions; in the other we place the statues of all principal inventors. There we have the statue of your Columbus, that discovered the West Indies: also the inventor of ships: your monk that was the inventor of ordnance and of gunpowder: the inventor of music: the inventor of letters: the inventor of printing: the inventor of observations of astronomy: the inventor of works in metal: the inventor of glass: the inventor of silk of the

worm: the inventor of wine: the inventor of corn and bread: the inventor of sugars; and all these by more certain tradition than you have. Then we have divers inventors of our own of excellent works; which since you have not seen, it were too long to make descriptions of them; and besides, in the right understanding of those descriptions you might easily err. For upon every invention of value we erect a statue to the inventor, and give him a liberal and honourable reward. These statues are some of brass, some of marble and touchstone, some of cedar and other special woods gilt and adorned; some of iron, some of silver, some of gold.

"We have certain hymns and services, which we say daily, of laud and thanks to God for His marvellous works. And forms of prayers, imploring His aid and blessing for the illumination of our labours; and turning them into good and holy uses.

"Lastly, we have circuits or visits of divers principal cities of the kingdom; where, as it cometh to pass, we do publish such new profitable inventions as we think good. And we do also declare natural divinations of diseases, plagues, swarms of hurtful creatures, scarcity, tempest, earthquakes, great inundations, comets, temperature of the year, and divers other things; and we give counsel thereupon, what the people shall do for the prevention and remedy of them."

And when he³ had said this, he stood up; and I, as I had been taught, knelt down; and he laid his right hand upon my head, and said, "God bless thee, my son, and God bless this relation which I have made. I give thee leave to publish it for the good of other nations; for we here are in God's bosom, a land unknown." And so he left me, having assigned a value of about two thousand ducats for a bounty to me and my fellows. For they give great largesses, where they come, upon all occasions.

³The account was given by one of the fathers of Salomon's House.

THE METHOD OF SCIENTIFIC INVESTIGATION¹

Thomas Henry Huxley

THE method of scientific investigation is nothing but the expression of the necessary mode of working of the human mind. It is simply the mode at which all phenomena are reasoned about, rendered precise and exact. There is no more difference, but there is just the same kind of difference, between the mental operations of a man of science and those of an ordinary person, as there is between the operations and methods of a baker or of a butcher weighing out his goods in common scales, and the operations of a chemist in performing a difficult and complex analysis by means of his balance and finely graduated weights. It is not that the action of the scales in the one case, and the balance in the other, differ in the principles of their construction or manner of working; but the beam of one is set on an infinitely finer axis than the other, and of course turns by the addition of a much smaller weight.

You will understand this better, perhaps, if I give you some familiar example. You have all heard it repeated, I dare say, that men of science work by means of induction and deduction, and that by the help of these operations, they, in a sort of sense, wring from Nature certain other things, which are called natural laws, and causes, and that out of these, by some cunning skill of their own, they build up hypotheses and theories. And it is imagined by many, that the operations of the common mind can be by no means compared with these processes, and that they have to be acquired by a sort of special apprenticeship to the craft. To hear all these large words, you would think that the mind of a man of science must be constituted differently from that of his fellow men; but if you will not be frightened by terms, you will discover that you are quite wrong, and that all these terrible apparatus are being used by yourselves every day and every hour of your lives.

There is a well-known incident in one of Molière's plays, where the author makes the hero express unbounded delight on being told that he had been talking prose during the whole of his life. In the same way, I trust, that you will take comfort, and be delighted with yourselves, on the discovery that you have been acting on the principles of inductive and deductive philosophy during the same period. Probably there is not one here who has not in the course of the day had occasion to set in motion a complex train of reasoning,

¹From the third of six lectures given to workingmen by Huxley on *The Causes of the Phenomena of Organic Nature* (1863).

of the very same kind, though differing of course in degree, as that which a scientific man goes through in tracing the causes of natural phenomena.

A very trivial circumstance will serve to exemplify this. Suppose you go into a fruiterer's shop, wanting an apple,—you take up one, and, on biting it, you find it is sour; you look at it, and see that it is hard and green. You take up another one, and that too is hard, green, and sour. The shopman offers you a third; but, before biting it, you examine it, and find that it is hard and green, and you immediately say that you will not have it, as it must be sour, like those that you have already tried.

Nothing can be more simple than that, you think; but if you will take the trouble to analyse and trace out into its logical elements what has been done by the mind, you will be greatly surprised. In the first place, you have performed the operation of induction. You found that, in two experiences, hardness and greenness in apples went together with sourness. It was so in the first case, and it was confirmed by the second. True, it is a very small basis, but still it is enough to make an induction from; you generalise the facts, and you expect to find sourness in apples where you get hardness and greenness. You found upon that a general law, that all hard and green apples are sour; and that, so far as it goes, is a perfect induction. Well, having got your natural law in this way, when you are offered another apple which you find is hard and green, you say, "All hard and green apples are sour; this apple is hard and green, therefore this apple is sour." That train of reasoning is what logicians call a syllogism, and has all its various parts and terms,—its major premiss, its minor premiss, and its conclusion. And, by the help of further reasoning, which, if drawn out, would have to be exhibited in two or three other syllogisms, you arrive at your final determination, "I will not have that apple." So that, you see, you have, in the first place, established a law by induction, and upon that you have founded a deduction, and reasoned out the special conclusion of the particular case. Well now, suppose, having got your law, that at some time afterwards, you are discussing the qualities of apples with a friend: you will say to him, "It is a very curious thing,—but I find that all hard and green apples are sour!" Your friend says to you, "But how do you know that?" You at once reply, "Oh, because I have tried them over and over again, and have always found them to be so." Well, if we were talking science instead of common sense, we should call that an experimental verification. And, if still opposed, you go further, and say, "I have heard from the people in Somersetshire and Devonshire, where a large number of apples are grown, that they have observed the same thing. It is also found to be the case in Normandy, and in North America. In short, I find it to be the universal experience of mankind wherever attention has been directed to the subject."

Whereupon, your friend, unless he is a very unreasonable man, agrees with you, and is convinced that you are quite right in the conclusion you have drawn. He believes, although perhaps he does not know he believes it, that the more extensive verifications are,—that the more frequently experiments have been made, and results of the same kind arrived at,—that the more varied the conditions under which the same results are attained, the more certain is the ultimate conclusion, and he disputes the question no further. He sees that the experiment has been tried under all sorts of conditions, as to time, place, and people, with the same result; and he says with you, therefore, that the law you have laid down must be a good one, and he must believe it.

In science we do the same thing;—the philosopher exercises precisely the same faculties, though in a much more delicate manner. In scientific inquiry it becomes a matter of duty to expose a supposed law to every possible kind of verification, and to take care, moreover, that this is done intentionally, and not left to a mere accident, as in the case of the apples. And in science, as in common life, our confidence in a law is in exact proportion to the absence of variation in the result of our experimental verifications. For instance, if you let go your grasp of an article you may have in your hand, it will immediately fall to the ground. That is a very common verification of one of the best established laws of nature—that of gravitation. The method by which men of science establish the existence of that law is exactly the same as that by which we have established the trivial proposition about the sourness of hard and green apples. But we believe it in such an extensive, thorough, and unhesitating manner because the universal experience of mankind verifies it, and we can verify it ourselves at any time; and that is the strongest possible foundation on which any natural law can rest.

So much, then, by way of proof that the method of establishing laws in science is exactly the same as that pursued in common life. Let us now turn to another matter (though really it is but another phase of the same question), and that is, the method by which, from the relations of certain phenomena, we prove that some stand in the position of causes towards the others.

I want to put the case clearly before you, and I will therefore show you what I mean by another familiar example. I will suppose that one of you, on coming down in the morning to the parlour of your house, finds that a tea-pot and some spoons which had been left in the room on the previous evening are gone,—the window is open, and you observe the mark of a dirty hand on the window-frame, and perhaps, in addition to that, you notice the impress of a hob-nailed shoe on the gravel outside. All these phenomena have struck your attention instantly, and before two seconds have passed you say, "Oh, somebody has broken open the window, entered the room, and run off

with the spoons and the tea-pot!" That speech is out of your mouth in a moment. And you will probably add, "I know there has; I am quite sure of it." You mean to say exactly what you know; but in reality you are giving expression to what is, in all essential particulars, an hypothesis. You do not know it at all; it is nothing but an hypothesis rapidly framed in your own mind. And it is an hypothesis founded on a long train of inductions and deductions.

What are those inductions and deductions, and how have you got at this hypothesis? You have observed in the first place, that the window is open; but by a train of reasoning involving many inductions and deductions, you have probably arrived long before at the general law—and a very good one it is—that windows do not open of themselves; and you therefore conclude that something has opened the window. A second general law that you have arrived at in the same way is, that tea-pots and spoons do not go out of a window spontaneously, and you are satisfied that, as they are not now where you left them, they have been removed. In the third place, you look at the marks on the window-sill, and the shoe-marks outside, and you say that in all previous experience the former kind of mark has never been produced by anything else but the hand of a human being; and the same experience shows that no other animal but man at present wears shoes with hob-nails in them such as would produce the marks in the gravel. I do not know, even if we could discover any of those "missing links" that are talked about, that they would help us to any other conclusion! At any rate the law which states our present experience is strong enough for my present purpose. You next reach the conclusion that, as these kinds of marks have not been left by any other animals than men, or are liable to be formed in any other way than by a man's hand and shoe, the marks in question have been formed by a man in that way. You have, further, a general law, founded on observation and experience, and that, too, is, I am sorry to say, a very universal and unimpeachable one,—that some men are thieves; and you assume at once from all these premisses—and that is what constitutes your hypothesis—that the man who made the marks outside and on the window-sill, opened the window, got into the room, and stole your tea-pot and spoons. You have now arrived at a *vera causa*;—you have assumed a cause which, it is plain, is competent to produce all the phenomena you have observed. You can explain all these phenomena only by the hypothesis of a thief. But that is a hypothetical conclusion, of the justice of which you have no absolute proof at all; it is only rendered highly probable by a series of inductive and deductive reasonings.

I suppose your first action, assuming that you are a man of ordinary common sense, and that you have established this hypothesis to your own

satisfaction, will very likely be to go off for the police, and set them on the track of the burglar, with the view to the recovery of your property. But just as you are starting with this object, some person comes in, and on learning what you are about, says, "My good friend, you are going on a great deal too fast. How do you know that the man who really made the marks took the spoons? It might have been a monkey that took them, and the man may have merely looked in afterwards." You would probably reply, "Well, that is all very well, but you see it is contrary to all experience of the way tea-pots and spoons are abstracted; so that, at any rate, your hypothesis is less probable than mine." While you are talking the thing over in this way, another friend arrives, one of that good kind of people that I was talking of a little while ago. And he might say, "Oh, my dear sir, you are certainly going on a great deal too fast. You are most presumptuous. You admit that all these occurrences took place when you were fast asleep, at a time when you could not possibly have known anything about what was taking place. How do you know that the laws of Nature are not suspended during the night? It may be that there has been some kind of supernatural interference in this case." In point of fact, he declares that your hypothesis is one of which you cannot at all demonstrate the truth, and that you are by no means sure that the laws of Nature are the same when you are asleep as when you are awake.

Well, now, you cannot at the moment answer that kind of reasoning. You feel that your worthy friend has you somewhat at a disadvantage. You will feel perfectly convinced in your own mind, however, that you are quite right, and you say to him, "My good friend, I can only be guided by the natural probabilities of the case, and if you will be kind enough to stand aside and permit me to pass, I will go and fetch the police." Well, we will suppose that your journey is successful, and that by good luck you meet with a policeman; that eventually the burglar is found with your property on his person, and the marks correspond to his hand and to his boots. Probably any jury would consider those facts a very good experimental verification of your hypothesis, touching the cause of the abnormal phenomena observed in your parlour, and would act accordingly.

Now, in this supposititious case, I have taken phenomena of a very common kind, in order that you might see what are the different steps in an ordinary process of reasoning, if you will only take the trouble to analyse it carefully. All the operations I have described, you will see, are involved in the mind of any man of sense in leading him to a conclusion as to the course he should take in order to make good a robbery and punish the offender. I say that you are led, in that case, to your conclusion by exactly the same train of reasoning as that which a man of science pursues when he is endeavouring

to discover the origin and laws of the most occult phenomena. The process is, and always must be, the same; and precisely the same mode of reasoning was employed by Newton and Laplace in their endeavours to discover and define the causes of the movements of the heavenly bodies, as you, with your own common sense, would employ to detect a burglar. The only difference is, that the nature of the inquiry being more abstruse, every step has to be most carefully watched, so that there may not be a single crack or flaw in your hypothesis. A flaw or crack in many of the hypotheses of daily life may be of little or no moment as affecting the general correctness of the conclusions at which we may arrive; but, in a scientific inquiry, a fallacy, great or small, is always of importance, and is sure to be in the long run constantly productive of mischievous, if not fatal results.

Do not allow yourselves to be misled by the common notion that an hypothesis is untrustworthy simply because it is an hypothesis. It is often urged, in respect to some scientific conclusion, that, after all, it is only an hypothesis. But what more have we to guide us in nine-tenths of the most important affairs of daily life than hypotheses, and often very ill-based ones? So that in science, where the evidence of an hypothesis is subjected to the most rigid examination, we may rightly pursue the same course. You may have hypotheses, and hypotheses. A man may say, if he likes, that the moon is made of green cheese: that is an hypothesis. But another man, who has devoted a great deal of time and attention to the subject, and availed himself of the most powerful telescopes and the results of the observations of others, declares that in his opinion it is probably composed of materials very similar to those of which our own earth is made up: and that is also only an hypothesis. But I need not tell you that there is an enormous difference in the value of the two hypotheses. That one which is based on sound scientific knowledge is sure to have a corresponding value; and that which is a mere hasty random guess is likely to have but little value. Every great step in our progress in discovering causes has been made in exactly the same way as that which I have detailed to you. A person observing the occurrence of certain facts and phenomena asks, naturally enough, what process, what kind of operation known to occur in Nature applied to the particular case, will unravel and explain the mystery? Hence you have the scientific hypothesis; and its value will be proportionate to the care and completeness with which its basis had been tested and verified. It is in these matters as in the commonest affairs of practical life: the guess of the fool will be folly, while the guess of the wise man will contain wisdom. In all cases, you see that the value of the result depends on the patience and faithfulness with which the investigator applies to his hypothesis every possible kind of verification.

THIS UNSCIENTIFIC AGE¹

Robert L. Duffus

AT LEAST nine out of every ten educated persons if asked to characterize instantly and in a word the basic element in present-day civilization would certainly say "science." If they thought twice, or perhaps three times, before replying, or if they had the opportunity, as I recently had, to look at the situation through the eyes of a group of desperately earnest scientists and educators, they would realize that they were wrong.

Not only is our generation not scientific; it is less scientific than the generation which preceded it. In many ways it is less scientific than the generation which produced *The Origin of Species*; in some ways it is less rational than the late eighteenth century.

Look at the picture of our modern Age of Reason: widespread applications of censorship, which frustrate and deny the right of private judgment; educational systems which have grown into mere schemes for mass indoctrination; irrational impulses, emotions, and superstitions breaking down the machinery of distribution; continued and almost universal preparations for wars by which it can be mathematically demonstrated that no participant can possibly gain; the reversion of whole nations to a studied barbarism.

Some of these imbecilic objectives are achieved by means of new technics (the radio, psychological "conditioning," airplanes, poison gas, etc.), but that does not make them scientific. Science may be defined as a process of experimentation and rationalization, with the aid of which natural laws are formulated, tested, and utilized. By no stretch of the imagination can such a process be regarded as dominating the course of civilization in the year 1934. Science and scientific thinking are the attributes of a pitifully small minority, and not of that minority which is at present directing the affairs of mankind. Science on the one hand, and common use and wont on the other, are like the "Siamese twins" exhibited in a New York revue some years ago, who differed from other Siamese twins in that they were not Siamese, were not physically linked together, were not twins, and didn't even look like each other.

It is easy to deceive ourselves on this score because all of us unavoidably make use of a great number of scientific tools and playthings. Yet it is folly to believe that because a spiritual descendant of Attila avails himself of the discoveries of chemists and physicists to make his armies more terrible, he is assuming a scientific attitude; or that a cotton mill owner is scientific because he introduces new looms and cuts his labor costs; or that a man who operates a motor car or twiddles the dials on a radio set is on that account any closer to

¹From *Harper's Magazine*, December, 1934.

an understanding of cause and effect than was his ancestor who drove a horse and played the fiddle.

Scientific information has entered into every literate person's life to a greater or lesser extent. The scientific mode of thought obviously has not. Actually—and this is the point of the argument—there is almost no connection between these two factors. Individually and collectively we may stuff ourselves with so-called scientific data from childhood to old age, and never be a whit the wiser. On the whole, our civilization has done precisely that.

Let us consider the case of the average American who, we like to believe, is the most enlightened of God's creatures. What opportunity does he have, after forgetting the rudiments learned in school, to come in contact with the workings of the scientific mind?

He does, or can, expose himself to a vast flood of facts *about* science. The agencies for the dissemination of these facts are of many kinds. They range from the carefully written but not too technical book of a man who is himself an investigator (and who is lucky if he can count his circulation by thousands instead of hundreds) to the flashy "freaks" which may be found in the Sunday or daily editions of the more sensational newspapers. Lectures, radio talks, motion pictures, and museums, each in a different way, add to the store of information available to at least a part of the public. There are popular magazines nominally devoted to "science." One or two scientific feature services are intelligently edited. On the whole, scientific data receive far more extensive and somewhat more enlightened treatment in the press and in other popular vehicles of communication than they did a few years ago.

Unfortunately there is every reason to believe that millions of our fellow-citizens open their eyes or ears to this factual flood in the same uncritical spirit with which their great-grandparents listened to old wives' tales or their remoter ancestors accepted the priestly interpretations of the utterances of the tribal gods.

Clever advertisers long ago learned the efficacy of the charmed phrase, "Science says," accompanied by the photograph of a learned-looking gentleman with a microscope, a white coat, and a neatly trimmed beard. For a large portion of the public science is in danger of becoming merely a new kind of magic. That is, it is in danger of being transmuted into something that is not science at all. Its facts may easily become as pretty and meaningless as so many sea shells picked up by someone who knows nothing about life in the sea. They may even lack the kind of system and logic that a traditional set of superstitions has.

This state of affairs would not be so menacing if science, regardless of whether we understand it or not, were not doing so many things to us. But

the fact notoriously is that, without infecting more than an infinitesimal fraction of the population with its ideas and its intellectual habits, science has actually created a new human environment. So far as most of us are concerned, this vast change has been imposed and accepted rather than created and understood.

The folkways have thus been transformed much as they would be if there were an abrupt alteration in the climate and new species of plants and animals and new living conditions were spontaneously produced. Unfortunately, though science brought about this change in folkways, the change itself has not been scientifically guided. Despite certain social inventions (to borrow a concept of Prof. W. F. Ogburn) such as labor unions, workmen's compensation, direct primaries, holding companies, and so on, inventiveness has hardly been applied at all to human institutions. Nor is there likelihood that it will be until an appreciable percentage of the human race has learned to think scientifically. Until that time we shall be creatures of chance almost as much as were our ancestors who lived in trees and caves and never dreamed of controlling (unless by sacrifices and incantations) the forces of nature.

Indeed, our situation is more precarious than that of our ancestors, for we have subjugated Nature without collectively understanding her and use forces whose total effects we are not at present able to delimit. Without a general penetration of the scientific spirit into our consciousness we are just as likely to destroy ourselves as to benefit ourselves by our new powers.

Our failure to keep step with science may be thought of as having three phases: (1) we have not made adequate use of the scientific means at our disposal; (2) we have used scientific means to bring about what seemed to be a specific good, without taking account of other effects which may be positively harmful; (3) we have diverted science to purely destructive uses. Let us examine our predicament under these three heads.

The progress of medicine is a shining example of what applied science can do for the human race and also of the extreme reluctance of the human race to accept what science has to offer. It is true that for many years the American death rate has been falling: in 1880 it was nearly 20 for each thousand of population annually; at the present time it is only about 11 for each thousand. This reduction has been accomplished in large measure by an enormous drop in the mortality rates for infants and children, in lesser degree by increased control of such diseases as yellow fever, typhoid fever, tuberculosis, and hook-worm disease.

Yet consider this passage from the report of the Committee on the Costs of Medical Care: "The death rates from cancer, diabetes, and appendicitis are

rising threateningly. More babies are dying each year, many of them needlessly, than there were American soldiers killed in the World War. Every year tuberculosis kills its thousands and costs the country more than half a billion dollars. By early application of our knowledge we could double the cured cases of cancer. The venereal diseases still levy a heavy toll of blindness and mental disorders upon the nation. A great army of rheumatics remains untreated without hope of alleviation or cure. Many diabetics still remain without insulin or receive it too late. Human life in the United States is being wasted, as recklessly, as surely, in times of peace as in times of war. Thousands of people are sick and dying daily in this country because the knowledge and facilities that we have are inadequately applied."

An analysis of these facts would reveal a number of causes for them. Poverty is one of them: we can seemingly afford more than twice as much for automobiles as for medical care. Ignorance is another: we spend nearly half a billion dollars in a normal year on patent medicines and the services of various quacks. Governmental parsimony is a third: we spend three times as much on our navy as we do on all tax-supported public health work. A fourth cause is the resistance of conservative medical men to the use of the social agencies necessary to bring the benefits of medical science to all the people. Ask your doctor what he thinks of health insurance or "state medicine."

All these causes are institutional, traditional, emotional. They reflect our inability to apply medical knowledge with the same relentless precision which produces it. We are scientific in the laboratory and hospital, credulous, superstitious, and careless once we are outside their doors.

One more instance may be given of the inadequate use of existing scientific knowledge—an instance all too familiar to everyone who reads these words. An economic depression is nothing more than a clash between the technology of production and distribution on the one hand and certain obstructing folkways on the other. It is a commonplace, too banal to repeat here if it did not fit so perfectly into the argument, that poverty has become technologically unnecessary. It is not necessary to labor the point. Idle factories and unemployment at a time when human needs are tragically unsatisfied are a proof of it. So was the ability of the contending nations during the World War to withdraw millions of men from production and to spend billions of dollars for military purposes and still maintain the civilian populations. No one can deny the potential existence of a huge social surplus.

I am not leading up to a suggestion that we adopt Communism, Socialism, Fascism, or even the Douglas Social Credit plan, although all of these systems are more or less blundering methods of breaking down the deadlock between technology and the folkways. But let the reader ask himself what kind of

reaction these names produce in him. Unless he is a very unusual person, the reaction will be emotional. Some people are even emotional about the New Deal. Now, emotion is very well in its place, and there is not the slightest danger that it will disappear from human life. But the very fact that we approach reforms in our social system emotionally shows that we are not approaching them scientifically. We are not treating the deadlock of distribution as an obstacle to be overcome by disinterested experiment. We go at it in the atavistic spirit of conflict, even of hate. But even brotherly love is not enough. The problem is one to be solved by instruments of precision, like a surgeon's, in hands that do not shake with fear, with anger or with love. The Golden Rule may emerge from that operation, but if so it will be because the scientists and technologists in charge took nothing, not even the Golden Rule, for granted.

But we have applied science, if not to our whole lives at least to a part of them. To be sure we have. We have built cities which are a marvel to behold. The largest of them is fairly honeycombed with subways, through which run trains drawn by an invisible power that no one understands. The trains, the motors, the signal lights, the tunnels themselves are products of an appalling ingenuity, of a prodigious body of knowledge. Above them are buildings hundreds of feet high, framing streets jammed with vehicles which are moved by never-ending millions of explosions taking place inside of exquisitely timed machinery.

The city itself, however, is not exquisitely timed. The subway is not a pleasant place at any time. During the rush hours it is as barbarous as any camp of Stone Age men. The speed of the motor car is reduced to a crawl by congestion. Fifty years ago one could drive with a horse and buggy from Thirty-fourth Street to Fifty-ninth Street along Fifth Avenue faster than he could now make the distance at most times of the day in an automobile.

From store doors, from apartment windows, and—worst horror of all—from moving cabs, the radio blares. We all know what imbecilities it gives voice to during at least nine-tenths of its operating time. Yet the radio too is a triumph of science, a dream of the ages come true. Overhead moves another triumph, droning heavily, perhaps emitting a huge advertising yowl. Over on Broadway the picture theaters are in full career, and they too would out-pace the maddest dreams of any builder of mechanical utopias in ages past. Or take off your hat and walk with reverent steps into Rockefeller Center. A whirl of feminine legs, like a great daisy, on a revolving stage, a full orchestra suddenly rising out of the depths and sliding smoothly backward, figures on a curtain going through a vulgarized version of a story as old as the hills.

People moving in unhappy throngs to and from their work, to and from

their play; people crowded into rabbit-warrens, nerves made ragged by unnecessary noise and confusion; the constant roar of traffic in the streets. A city almost every detail of which is a product of modern science. A city put together almost without science.

What has happened is clear to anyone who will pause to consider how cities and civilizations grow in an unscientific age. Neither the city nor the civilization of which it is a part was planned. No pains were taken to see that any two things placed in juxta-position really belonged that way. The subways were built to relieve congestion, with no thought that they would also produce it. The big buildings were erected with the idea that they would prove convenient; no one foresaw that too many of them would be hideously inconvenient. "Improvements," each one commending itself to common sense, accumulated one after the other, with no care taken as to their interrelations, until it is now a question whether the city, as a machine for living, is as satisfactory as it was a hundred years ago. And there are cities less happy than the one we have been picturing. The happiest cities, if all were well with science, should be those where the most science has been applied to the square inch. But they are not. The happiest cities of this modern world are the most shiftless ones, the ones least blighted with the products of our misdirected ingenuity. I have two or three in mind. The reader, if he has traveled a little, may think of several.

Yet it is not science that has been to blame; it is the absence of science. We have not built cities as we have built bridges and buildings, with a previous calculation of stresses and strains. We have built them with less than the foresight of a child playing with blocks. There have been certain obstacles in the way. Quite true. But those obstacles have not been material conditions but an obsolete set of tribal mores. Human selfishness, embedded in moth-eaten institutions, has played, and continues to play, its part. But the mere refusal to consider things carefully, precisely, and intelligently in their relation to one another has played a larger part.

Certainly a very small minority of us would build exactly the kind of cities or exactly the kind of civilization we have if the choice were open. The sum total is decidedly too messy. That sum total was not deliberately willed by anybody. It happened into being because a large number of diverse and irreconcilable things were willed by a great many people. It was a product of acute specialization, the effect of which on society has been a kind of acute indigestion.

It is customary in these times to speak of "trends" and to defer to them as though they were natural laws. The "rush to the cities" was a trend, and

we were urged to adapt ourselves to it. Congestion is a trend, and we are advised to make the best of it. Steel houses, double-decked streets, cellophane, the minute subdivision of labor until craftsmanship is in danger of disappearing, mechanization, centralization, chauvinism, militarism—all are, or may soon be, trends, and it is suggested that we learn how to adapt ourselves to them.

Some of them—let us not bother to decide which—may be good and acceptable. But there is no sound reason why we should accept any of them if they are not. We should stand up on our scientific hind legs and accept only those which can be demonstrated as good by a painstaking study of their present and probable effects. To submit blindly to a trend is to submit to the rule of superstition and unreason.

Reflect, for example, on the trend toward war, which falls into the third of our categories—the diversion of science to purely destructive uses. No one who can add up figures can possibly regard war as a paying enterprise. The last great war demonstrably was not, and warlike machinery has now been so much improved that the next one will be even less so. Now science has contributed enormously to the destructiveness of war. Science has taught us how to mutilate, disembowel, and strangle, at vast distances, and with the utmost precision. Yet war itself, all considerations of humanity set aside, is the negation of science, for it creates and perpetuates an atmosphere in which the spirit of free inquiry cannot survive.

It should be evident by this time that much of what is called science is not science at all but a misuse of applied science and a misunderstanding of science itself. The visual and auditory hideousness of cities, the dreadful monotony of factory work, "over-production," class conflict, war—all are due to partial and distorted applications of the existing body of knowledge. Science uninhibited and unrestrained could give our civilization health, leisure, beauty, peace, and even the brotherhood of man. It has failed to do so because we have refused to permit it to do so. We are like the barbarians who marched into Rome during the last days of the Empire. We are in the midst of riches which we are incapable of utilizing.

How shall we escape from the domination of instinct and emotion, which at present really determine our collective life? Manifestly by a process of education, the means for which must be far more ambitious than any the world has yet seen. Education must be continuous, from childhood to old age. Science must be made a whole, an entity, instead of a fraction. It must be so thoroughly embedded in the normal culture that it will displace superstition, magic, and unreasoning prejudice. The average man must possess the rudiments of scientific thought.

There need be no fear that anything precious will be lost by this process. Science is simply a quest for truth. Whatever truth there may be in the arts, in religion, in cherished observances will be preserved, not sacrificed, by the scientific approach. We do not need new doctrines, but rather a new attitude toward doctrines. The experience of vast populations with communism, fascism, and even democracy indicates that this should be a skeptical, experimental attitude. Skepticism is in one sense the fundamental of science, just as irrational acceptance is a fundamental of mobs, of armies, and of political parties.

Let us proceed on the assumption that we have a public which has to be educated out of the habit of accepting the unproven hypothesis. In that habit we have the key to many, though not all, of the world's present difficulties. We see it enforced by the police power in at least three countries—Russia, Germany, and Italy. We see it stimulated by ingenious advertising and by carefully planned propaganda in such qualified democracies as France, Great Britain, and the United States.

We can break it down only by a persistent, long-continued scientific counter-attack: scientific not because its subject matter is limited by laboratory technics, but because the scientific method—that is, the careful, logical, and unbiased weighing of evidence—must, if it is to continue in any field of knowledge, be applied to all fields.

I am irresistibly reminded of James Harvey Robinson's magnificent essay on "The Humanizing of Knowledge," and especially of that famous concluding passage in which he quotes Dr. T. V. Smith of the University of Chicago:

Many researchers think the popularization of science either hopeless or needless. In their sense of the term it is probably both. But if no precautions are taken to bridge the gap between scientific knowledge and popular prejudice it may grow so wide that the researcher will find himself engulfed. A man of science has recently declared boldly and rightly that "the emotional life of man is primary." In the development of both the race and the individual "the human heart has the right of way. . . . Science must humbly reinstate itself as the instrument of humanity's desires. The needs of humanity render this no more imperative than does the perpetuation of science itself. And since intelligence does exist as the instrument of human need, intelligence must save its life by losing its pride."

Events since these words were written have emphasized the frightful possibilities in giving scientific tools and weapons to a non-scientific society. Civilization cannot continue to exist half scientific and half committed to Stone Age prejudices and superstitions. There cannot long be one law of

laboratory thinking and another of social, economic, and political thinking. That "careful and critical knowledge" (to quote Dr. Robinson again) which is called science must be applied to all fields of human activity or we shall eventually find it applied to none.

NATURE OF THE PHYSICAL WORLD¹

A. S. Eddington

I HAVE settled down to the task of writing these lectures and have drawn up my chairs to my two tables. Two tables! Yes; there are duplicates of every object about me—two tables, two chairs, two pens.

This is not a very profound beginning to a course which ought to reach transcendent levels of scientific philosophy. But we cannot touch bedrock immediately; we must scratch a bit at the surface of things first. And whenever I begin to scratch the first thing I strike is—my two tables.

One of them has been familiar to me from earliest years. It is a commonplace object of that environment which I call the world. How shall I describe it? It has extension; it is comparatively permanent; it is colored; above all it is *substantial*. By substantial I do not merely mean that it does not collapse when I lean upon it; I mean that it is constituted of "substance" and by that word I am trying to convey to you some conception of its intrinsic nature. It is a *thing*; not like space, which is a mere negation; nor like time, which is—Heaven knows what! But that will not help you to my meaning because it is the distinctive characteristic of a "thing" to have this substantiality, and I do not think substantiality can be described better than by saying that it is the kind of nature exemplified by an ordinary table. And so we go round in circles. After all if you are a plain commonsense man, not too much worried with scientific scruples, you will be confident that you understand the nature of an ordinary table. I have even heard of plain men who had the idea that they could better understand the mystery of their own nature if scientists would discover a way of explaining it in terms of the easily comprehensible nature of a table.

Table No. 2 is my scientific table. It is a more recent acquaintance and I do not feel so familiar with it. It does not belong to the world previously mentioned—that world which spontaneously appears around me when I open

¹From *The Nature of the Physical World*, by A. S. Eddington (1928). By permission of The Macmillan Company, publishers.

my eyes, though how much of it is objective and how much subjective I do not here consider. It is part of a world which in more devious ways has forced itself on my attention. My scientific table is mostly emptiness. Sparsely scattered in that emptiness are numerous electric charges rushing about with great speed; but their combined bulk amounts to less than a billionth of the bulk of the table itself. Notwithstanding its strange construction it turns out to be an entirely efficient table. It supports my writing paper as satisfactorily as table No. 1; for when I lay the paper on it the little electric particles with their headlong speed keep on hitting the underside, so that the paper is maintained in shuttlecock fashion at a nearly steady level. If I lean upon this table I shall not go through; or, to be strictly accurate, the chance of my scientific elbow going through my scientific table is so excessively small that it can be neglected in practical life. Reviewing their properties one by one, there seems to be nothing to choose between the two tables for ordinary purposes; but when abnormal circumstances befall, then my scientific table shows to advantage. If the house catches fire my scientific table will dissolve quite naturally into scientific smoke, whereas my familiar table undergoes a metamorphosis of its substantial nature which I can only regard as miraculous.

There is nothing *substantial* about my second table. It is nearly all empty space—space pervaded, it is true, by fields of force, but these are assigned to the category of “influences,” not of “things.” Even in the minute part which is not empty we must not transfer the old notion of substance. In dissecting matter into electric charges we have travelled far from that picture of it which first gave rise to the conception of substance, and the meaning of that conception—if it ever had any—has been lost by the way. The whole trend of modern scientific views is to break down the separate categories of “things,” “influences,” “forms,” etc., and to substitute a common background of all experience. Whether we are studying a material object, a magnetic field, a geometrical figure, or a duration of time, our scientific information is summed up in measures; neither the apparatus of measurement nor the mode of using it suggests that there is anything essentially different in these problems. The measures themselves afford no ground for a classification by categories. We feel it necessary to concede some background to the measures—an external world; but the attributes of this world, except in so far as they are reflected in the measures, are outside scientific scrutiny. Science has at last revolted against attaching the exact knowledge contained in these measurements to a traditional picture-gallery of conceptions which convey no authentic information of the background and obtrude irrelevancies into the scheme of knowledge.

I will not here stress further the non-substantiality of electrons, since it is scarcely necessary to the present line of thought. Conceive them as substantially as you will, there is a vast difference between my scientific table with its substance (if any) thinly scattered in specks in a region mostly empty and the table of everyday conception which we regard as the type of solid reality—an incarnate protest against Berkeleian subjectivism. It makes all the difference in the world whether the paper before me is poised as it were on a swarm of flies and sustained in shuttlecock fashion by a series of tiny blows from the swarm underneath, or whether it is supported because there is substance below it, it being the intrinsic nature of substance to occupy space to the exclusion of other substance; all the difference in conception at least, but no difference to my practical task of writing on the paper.

I need not tell you that modern physics has by delicate test and remorseless logic assured me that my second scientific table is the only one which is really there—wherever “there” may be. On the other hand I need not tell you that modern physics will never succeed in exorcising that first table—strange compound of external nature, mental imagery and inherited prejudice—which lies visible to my eyes and tangible to my grasp. We must bid good-bye to it for the present for we are about to turn from the familiar world to the scientific world revealed by physics. This is, or is intended to be, a wholly external world.

“You speak paradoxically of two worlds. Are they not really two aspects or two interpretations of one and the same world?”

Yes, no doubt they are ultimately to be identified after some fashion. But the process by which the external world of physics is transformed into a world of familiar acquaintance in human consciousness is outside the scope of physics. And so the world studied according to the methods of physics remains detached from the world familiar to consciousness, until after the physicist has finished his labors upon it. Provisionally, therefore, we regard the table which is the subject of physical research as altogether separate from the familiar table, without prejudging the question of their ultimate identification. It is true that the whole scientific inquiry starts from the familiar world and in the end it must return to the familiar world; but the part of the journey over which the physicist has charge is in foreign territory.

Until recently there was a much closer linkage; the physicist used to borrow the raw material of his world from the familiar world, but he does so no longer. His raw materials are ether, electrons, quanta, potentials, Hamiltonian functions, etc., and he is nowadays scrupulously careful to guard these from contamination by conceptions borrowed from the other world. There is a familiar table parallel to the scientific table, but there is no familiar elec-

tron, quantum or potential parallel to the scientific electron, quantum or potential. We do not even desire to manufacture a familiar counterpart to these things or, as we should commonly say, to "explain" the electron. After the physicist has quite finished his world-building a linkage or identification is allowed; but premature attempts at linkage have been found to be entirely mischievous.

Science aims at constructing a world which shall be symbolic of the world of commonplace experience. It is not at all necessary that every individual symbol that is used should represent something in common experience or even something explicable in terms of common experience. The man in the street is always making this demand for concrete explanation of the things referred to in science; but of necessity he must be disappointed. It is like our experience in learning to read. That which is written in a book is symbolic of a story in real life. The whole intention of the book is that ultimately a reader will identify some symbol, say BREAD, with one of the conceptions of familiar life. But it is mischievous to attempt such identifications prematurely, before the letters are strung into words and the words into sentences. The symbol *A* is not the counterpart of anything in familiar life. To the child the letter *A* would seem horribly abstract; so we give him a familiar conception along with it. "*A* was an Archer who shot at a frog." This tides over his immediate difficulty; but he cannot make serious progress with word-building so long as Archers, Butchers, Captains, dance round the letters. The letters are abstract, and sooner or later he has to realize it. In physics we have outgrown archer and apple-pie definitions of the fundamental symbols. To a request to explain what an electron really is supposed to be we can only answer, "It is part of the ABC of physics."

The external world of physics has thus become a world of shadows. In removing our illusions we have removed the substance, for indeed we have seen that substance is one of the greatest of our illusions. Later perhaps we may inquire whether in our zeal to cut out all that is unreal we may not have used the knife too ruthlessly. Perhaps, indeed, reality is a child which cannot survive without its nurse illusion. But if so, that is of little concern to the scientist, who has good and sufficient reasons for pursuing his investigations in the world of shadows and is content to leave to the philosopher the determination of its exact status in regard to reality. In the world of physics we watch a shadowgraph performance of the drama of familiar life. The shadow of my elbow rests on the shadow table as the shadow ink flows over the shadow paper. It is all symbolic, and as a symbol the physicist leaves it. Then comes the alchemist Mind who transmutes the symbols. The sparsely spread nuclei of electric force become a tangible solid; their restless

agitation becomes the warmth of summer; the octave of ethereal vibrations becomes a gorgeous rainbow. Nor does the alchemy stop here. In the transmuted world new significances arise which are scarcely to be traced in the world of symbols; so that it becomes a world of beauty and purpose—and, alas, suffering and evil.

The frank realization that physical science is concerned with a world of shadows is one of the most significant of recent advances. I do not mean that physicists are to any extent preoccupied with the philosophical implications of this. From their point of view it is not so much a withdrawal of untenable claims as an assertion of freedom for autonomous development. At the moment I am not insisting on the shadowy and symbolic character of the world of physics because of its bearing on philosophy, but because the aloofness from familiar conceptions will be apparent in the scientific theories I have to describe. If you are not prepared for this aloofness you are likely to be out of sympathy with modern scientific theories, and may even think them ridiculous—as, I daresay, many people do.

It is difficult to school ourselves to treat the physical world as purely symbolic. We are always relapsing and mixing with the symbols incongruous conceptions taken from the world of consciousness. Untaught by long experience we stretch a hand to grasp the shadow, instead of accepting its shadowy nature. Indeed, unless we confine ourselves altogether to mathematical symbolism it is hard to avoid dressing our symbols in deceitful clothing. When I think of an electron there rises to my mind a hard, red, tiny ball; the proton similarly is neutral gray. Of course the color is absurd—perhaps not more absurd than the rest of the conception—but I am incorrigible. I can well understand that the younger minds are finding these pictures too concrete and are striving to construct the world out of Hamiltonian functions and symbols so far removed from human preconception that they do not even obey the laws of orthodox arithmetic. For myself I find some difficulty in rising to that plane of thought; but I am convinced that it has got to come.

In these lectures I propose to discuss some of the results of modern study of the physical world which give most food for philosophic thought. This will include new conceptions in science and also new knowledge. In both respects we are led to think of the material universe in a way very different from that prevailing at the end of the last century. I shall not leave out of sight the ulterior object which must be in the mind of a Gifford Lecturer, the problem of relating these purely physical discoveries to the wider aspects and interests of our human nature. These relations cannot but have undergone change, since our whole conception of the physical world has radically

changed. I am convinced that a just appreciation of the physical world as it is understood to-day carries with it a feeling of open-mindedness towards a wider significance transcending scientific measurement, which might have seemed illogical a generation ago; and in the later lectures I shall try to focus that feeling and make inexpert efforts to find where it leads. But I should be untrue to science if I did not insist that its study is an end in itself. The path of science must be pursued for its own sake, irrespective of the views it may afford of a wider landscape; in this spirit we must follow the path whether it leads to the hill of vision or the tunnel of obscurity. Therefore till the last stage of the course is reached you must be content to follow with me the beaten track of science, nor scold me too severely for loitering among its wayside flowers. That is to be the understanding between us. Shall we set forth?

CROSSROADS¹

FOR ages lost in the drifts of time, some of the most mysterious eyes on earth have stared cryptically toward tiny Bikini Atoll. On Easter Island, outrigger of the fleets of archipelagoes that ride the Pacific Ocean, a long file of stone colossi rear cold, immortal faces. No one knows what men carved these gigantic symbols, what hands, what primitive technology raised them, with what devotion or what fears. Whether they are gods or images of human greatness, they are menacing; they are monuments to the fact that man's history can perish utterly from the earth.

Of all strange things that the Easter Island idols have looked out upon through the ages, the strangest was preparing last week. A world, with the power of universal suicide at last within its grasp, was about to make its first scientific test of that power. During the earliest favorable weather after July 1, two atom bombs would be exploded at Bikini Island. The first bomb (and the fourth ever to be detonated anywhere) would be dropped on 75 obsolete warcraft anchored in the Bikini lagoon. About three weeks later, a second atom bomb would be exploded under the surface of the lagoon.

"Operation Crossroads" (the irony of the name is intentional) had been ordered by the Combined Chiefs of Staff in Washington, would be carried out under the command of Vice Admiral W. H. P. Blandy, Commander of the joint Army-Navy task force. Against the peaceful backdrop of palm frond and pandanus, on this most "backward" of islands, the most progressive of centuries would write in one blinding stroke of disintegration the inner meaning of technological civilization: all matter is speed and flame. Well

¹Courtesy of *Time*, Inc., 1946.

might the stone giants embedded in the solid earth of Easter Island feel, in the far ripple of fission brought them by the waves, a tremor of finality.

On A-day the *Enola Gay*, the B-29 that dropped the atom bomb on Hiroshima, will take off from Kwajalein, 250 miles from Bikini. As it makes three trial runs over the orange-colored U.S.S. *Nevada*, takes readings of wind drift and adjusts the bomb sights, a loudspeaker will alert the whole area. Ten or more miles from the target, the operational ships will keep up steam in case the wind shifts. Aboard, some 40,000 men will lie down on the decks with their feet toward the blast and their eyes covered against blinding.

Then the *Enola Gay* will take off on its fourth and final run. The bomb bay will open. The bombardier, Major Harold Wood, before World War II a grocery clerk of Bordentown, N. J., will release the bomb.

Through the incomparable blast and flame that will follow, there will be dimly discernible, to those who are interested in cause & effect in history, the features of a shy, almost saintly, childlike little man with the soft brown eyes, the drooping facial lines of a world-weary hound, and hair like an aurora borealis. He is Professor Albert Einstein, author of the Theory of Special Relativity, the Unified Field Theory, and a decisive expansion of Max Planck's Quantum Theory, onetime director of Berlin's Kaiser Wilhelm Institute, Professor Emeritus at Princeton's Institute for Advanced Study, onetime Swiss citizen, onetime Enemy No. 1 of Hitler's Third Reich, now a U.S. citizen.

Albert Einstein did not work directly on the atom bomb. When the serpent of necessity hissed, the men and the woman who bit into the apple of scientific good and evil bore different names: Dr. Arthur Holly Compton, Dr. Enrico Fermi, Dr. Leo Szilard, Dr. H. C. Urey, Dr. Niels Bohr, Dr. J. R. Oppenheimer, *et al.* The woman was Dr. Lise Meitner, a German refugee.

But Einstein was the father of the bomb in two important ways: 1) it was his initiative which started U.S. bomb research; 2) it was his equation ($E = mc^2$) which made the atomic bomb theoretically possible.

Late in 1939, after the German *Panzers* had driven through Poland, and the citizens of Hiroshima were still going quietly about their daily tasks, the little man who hates to write letters wrote a letter to Franklin Roosevelt. In it he stated his conviction that a controlled chain reaction of atomic fission (and hence the atom bomb) was now feasible, that the German Government was working on an atomic bomb, that the U.S. must begin research on the bomb at once or civilization would perish. Einstein enclosed a report by his friend, Dr. Leo Szilard, describing in more technical language how and why the bomb was possible. Franklin Roosevelt acted. Result: the Manhattan Project, the bomb, the 125,000 dead of Hiroshima and Nagasaki, and the

biggest boost humanity has yet been given toward terminating its brief history of misery and grandeur.

If any future civilizations should be left to con the records of the modern world, they will probably declare Albert Einstein the 20th Century's greatest mind. Among 20th-Century men, he blends to an extraordinary degree those highly distilled powers of intellect, intuition and imagination which are rarely combined in one mind, but which, when they do occur together, men call genius. It was all but inevitable that this genius should appear in the field of science, for 20th-Century civilization is first and foremost technological.

It is typical of the dilemma of this civilization that masses of men humbly accept the fact of Einstein's genius, but only a handful understand in what it consists. They have heard that, in his Special and his General Theories of Relativity, Einstein finally explained the form and the nature of the physical universe and the laws governing it. They cannot understand his explanation. To a small élite of mathematicians and physicists, the score of equations in which Einstein embodied his picture of the universe and its functioning are as concrete as a kitchen table. To the layman they are as staggering as to be told, when he is straining to make out the smudge which is all he can see of the great cluster in the constellation Hercules, that the faint light that strikes his eye left its source 34,000 years ago.

Hence the pathetic paradox that Einstein's discoveries, the greatest triumph of reasoning mind on record, are accepted by most people on faith. Hence the fact that most people never expect to understand more about Relativity than is told by the limerick:

There was a young lady called Bright,
Who could travel much faster than light;
She went out one day,
In a relative way,
And came back the previous night.

For 200 years before Einstein, physicists had faithfully followed a set of basic laws published by the great Sir Isaac Newton in 1687. Their faithfulness had paid off. Sir Isaac led them to many triumphs and promised them many more.

Newton's laws were high-school simple. He assumed the existence of two independent entities—mass and force, which interacted as follows:

1. Every body (mass) continues in its state of rest, or of uniform motion in a straight line, except so far as it may be compelled by force to change that state.

2. Any two bodies attract one another with a force (gravitation) which is

proportional to the product of their masses divided by the square of the distance between them.

Upon these basic rules (and others closely related), physicists built an imposing structure of knowledge. They predicted the motions of the earth, the moon, the planets. They derived a maze of useful mechanical sub-laws. They explained the behavior of gases, and discovered the nature of heat. Newton's laws did not account for everything, but the physicists felt that this was due to their own ignorance. Eventually, they were sure, all phenomena could be explained in Newton's terms.

When conflicting facts were discovered by increasingly sensitive instruments, physicists tended to ignore them, or to explain them away by highly artificial creations. Most famous of these was the ether—a tenuous material supposed to fill all space. Ether was necessary (in Newtonian physics) for carrying light waves.

The ether had another valuable property: it was at rest—"the calm ether-sea"—while everything else in the universe was in motion. Thus it provided the only stable "frame of reference." The earth, for instance, was thought to have "absolute motion" through the motionless ether.

In 1887 came that dreadful day when the ether was done to death. Two U. S. physicists, Albert A. Michelson and E. W. Morley, measured the speed of light simultaneously in two directions at right angles to one another. The speeds were expected to differ slightly because of "ether drift" past the earth. They turned out to be exactly the same, proving conclusively that ether did not exist.

Loss of the ether left the physicists inconsolable. Without it, light waves had no medium to carry them. The vital "frame of reference" was gone. No motion was "absolute" now. The motion of every moving body could be measured only "relative" to some other moving body.

For nearly 20 years, the physicists worked hard to "save" the ether. But the ether could not be saved, and with it went the authority of Newton's scientific decalogue, which depended upon it. Science, the guiding mind of technological civilization, was in crisis.

Albert Einstein, then an unknown clerk in a Swiss patent office, rescued science. In his Theory of Special Relativity (1905) he abandoned Newton's assumption of independent mass and force. In its place he put the assumption, well supported by observation, that the speed of light in a vacuum is constant, no matter what the speed of its source.

This assumption was the heart of Relativity. When properly developed, mathematically, it led to astonishing conclusions, some of them (like many scientific facts) "contrary to common sense." Suppose, for instance, that the

earth is moving at many feet per second toward a star. This approaching motion does not increase the arrival speed of the star's light, which strikes the earth at exactly the same speed (186,000 miles per second) as if the earth were at rest. Expressed in an equation, it looks like this:

$$186,000 \text{ m p s} + \text{velocity of earth} = 186,000 \text{ m p s}$$

Even if the earth speeds toward the star at 100,000 m p s, it makes no difference:

$$186,000 \text{ m p s} + 100,000 \text{ m p s} = 186,000 \text{ m p s}$$

Obviously, something is wrong, for even Relativity does not abolish simple arithmetic. Einstein's daring conclusion was that only the speed of light is invariable. When the speed of a body changes, its dimensions and its mass and its time also change. As it speeds up, it shrinks (in the direction of the motion); its clocks slow down; its matter grows heavier. If the earth were to reach a speed of 161,000 m p s, every pound of matter in it would double in weight.

Observers on the speeded-up earth would not know that anything had changed. But with their slowed-down clocks and their shrunken yardsticks, they would measure the arriving starlight in such a way that its speed would come out 186,000 m p s. Under Relativity, the "absurd" equations above are not absurd.

Shrunken yardsticks are hard to measure, but the increase of mass which Einstein predicted in 1905 has been observed accurately. Certain material particles shot out by radium move at 185,000 m p s, almost the speed of light. When they are weighed in flight (by a magnetic device), their mass is shown to have increased according to his prediction.

What makes the mass increase? A fast-moving body, Einstein proved mathematically, has more energy, and energy has mass. Thus the mass of a moving body is its "rest-mass" plus the mass of the energy it contains.

This was a revolutionary concept. If energy can turn into mass by speeding up a moving body, then mass, perhaps, can turn into energy. "Certainly," said Einstein. "Mass, including the mass of all matter, is merely another form of energy." In his famous equation, he gave their equivalent values²: $E = mc^2$. This meant that every pound of any kind of matter contained as much energy as is given off by the explosion of 14 million tons of TNT. It took the world 40 years (until Hiroshima) to appreciate this shocker.

In that same year, 1905, Einstein advanced another theory which many historians of science consider even more important than Relativity. The ether was gone, and although Relativity established the velocity of light as the

² $E = mc^2$, with E standing for energy expressed in ergs, m the mass in grams, and c the speed of light in centimeters per second.

firmest figure in the universe, it did not supply any medium to carry the waves of light.

At that time nearly all physicists agreed that light consisted of waves whose properties had been observed in great detail. The old theory (favored by Newton) that light was speeding corpuscles had been abandoned. But the theory had one great advantage: corpuscles can move through space by themselves. Unlike waves, they need no medium to carry them.

Einstein's solution of this dilemma was characteristically bold. "Light," he said, "is both corpuscles and waves." A light ray is a shower of energy particles called "photons" whose energy increases with the wave frequency of the light.

Out of this simple but daring idea developed the supremely important knowledge that energy comes in small, discontinuous "quanta" analogous to the atoms of matter and the electrons of electricity.

"Special Relativity," though it stood many rigorous tests, was not accepted at once. For ten years Einstein worked, extending his theory to cover more varied "frames of reference." In 1915, he published his "General Relativity." It explained the force of gravitation itself, which Newton had merely pointed out.

Here was a chance for a final, convincing test. According to Einstein, light carried energy. Therefore it had mass. Therefore rays of light from a star should be bent by a definite amount when they passed through the strong gravitational field near the sun. A convenient solar eclipse provided the opportunity to test the theory. Star images near the rim of the blacked-out sun were displaced by almost exactly the amount which Einstein predicted, proving that their rays had been bent.

From that day, Relativity was the basic law of the universe. Einstein's photons, too, grew into the head-splitting Quantum Mechanics, which teaches that all matter is nothing but waves, crossing and interacting. Little by little, both theories have worked their way into nearly all branches of science.

The end of the physical revolution which Einstein started is not yet in sight. Perhaps it will stop itself—suddenly—in mid-development under the impact of that equation, $E = mc^2$, which inspired the nuclear physicists to turn small bits of matter into world-shaking energy.

If the atom bomb blasted the last popular skepticism about Einstein's genius it also blasted man's complacent pride in the power of unaided intellect. At the very moment that it was finally mastered, matter was most elusive and most menacing.

The fateful mind behind the bomb was born into the world it was to change so greatly, at Ulm, Germany, in 1879.

SCIENCE

Einstein's father was an unsuccessful merchant turned unsuccessful electrical engineer.

The boy was painfully shy, introspective, and so slow in learning to speak that his parents feared he was subnormal. At school he was a poor student. But he learned to improvise on the piano, and used to make up religious songs which he would hum in his own room where no one could hear him.

At 13, Albert was reading Kant's *Critique of Pure Reason*. Soon he discovered Schopenhauer and Nietzsche.

In 1895, Einstein took the entrance examinations for the Polytechnicum in Zurich, Switzerland. He failed, but got in a year later. At Zurich he completed his formal scientific education, became fast friends with the Austrian Socialist leader, political assassin and physicist, Friedrich Adler.

After graduation Einstein became a Swiss citizen, later married the Serbian mathematician, Mileva Marech, by whom he had two sons.

For two years Einstein earned a wretched living by tutoring. Then he got an obscure job as patent examiner in the Bern patent office. He worked there for seven years. They were among his most productive, theoretically. Scribbling his ideas on scraps of paper, which he thrust out of sight whenever a supervisor approached, Einstein developed his Theory of Special Relativity, which he published without fanfare under the modest title: *On the Electrodynamics of Moving Bodies*.

Relativity had been born, and among scientists the patent clerk was already famous. Soon he became a lecturer at Bern University, then extraordinary professor of physics at the University of Zurich. He taught for a year at the University of Prague, and in the most medieval city in Europe continued his development of the General Theory of Relativity (published in 1915).

One year before World War I, Max Planck (Quantum Theory) used his influence to have Einstein appointed professor at Berlin's Academy of Sciences. One of his duties was managing the Kaiser Wilhelm Institute for Physical Research. Since Einstein would not relinquish his Swiss citizenship, the Prussian Government gave him honorary citizenship.

After Hitler came to power, Einstein went first to Belgium and England, then to the U.S. In 1940 he became a U.S. citizen. In the U.S. he has continued to work on his Unified Field Theory, which he hopes will bridge the gap between his Relativity Theory and the Quantum Theory, thus producing a universal law of nature. There is a story that as he was crossing the Princeton campus one day with Dr. Abraham Flexner, head of the Institute for Advanced Study, Einstein said: "I think I am on the verge of my greatest discovery." A few weeks later he asked Flexner: "Do you remember that I

told you that I was about to make my greatest discovery?" "Yes," said Flexner, "I wonder how I restrained myself from asking you what it was." "Well," said Einstein, "it didn't pan out."

In Princeton, Einstein lives with simplicity in a prim, box-shaped frame house, with a wisteria vine shrouding the front porch. Until her death in 1936, his second wife (and cousin), Elsa, was the female Fafnir who guarded his peace, seclusion and his household accounts. It was Elsa who managed his swelling correspondence (20 letters on dull days, hundreds in season), kept off nosy newshawks and curious neighbors. The Einsteins loved music but did not approve of jazz. One neighbor, a friendly woman who was a great chess enthusiast and had heard that Einstein was too, dropped in to offer to play. "Chezz!" cried Elsa Einstein, who spoke English with a pronounced accent—"There shall be no chezz in this house."

Einstein works in an austere simple room with no instrument but a pencil. He has never made a laboratory experiment, though he likes to pad around the Institute's laboratory, and make suggestions for improving the apparatus. When people explain to him why the improvement will not improve, he says sadly: "*Ja, Ja*, I see that it will not work."

He likes to play the fiddle (favorite composers: Bach, Mozart), and to sail a boat. In sailing, his system is to set the sail, make it fast, and with no thought of velocity or energy, loll back while the boat drifts. He smokes a pipe, but never drinks.

Einstein is probably happiest among children, with whom he loses all his shyness and whom he keeps in gales of laughter. His kindness to children is proverbial. One little Princeton girl used this to good advantage: she got him to do her arithmetic homework for her. When suspected, she confessed simply: "Einstein did it for me."

Einstein was once violently pacifist. In 1930 he wrote: ". . . That vilest offspring of the herd mind—the odious militia. . . ." After Hitler, his thoughts became somewhat more martial. He is also a Zionist ("The Jew is most happy if he remains a Jew"), an internationalist ("Nationalism is the measles of mankind"). Einstein claims that he is a religious man ("Every really deep scientist must necessarily have religious feeling"). But he does not believe in the immortality of the soul.

Last week Professor Einstein seemed suffering from blast shock from the bomb he had fathered. In the *New York Times* he warned Americans that "There is no foreseeable defense against atomic bombs. . . . Scientists do not even know of any field which promises us any hope of adequate defense." The Emergency Committee of Atomic Scientists, of which Einstein is chairman, frantically appealed for \$200,000 to educate people to

"a new type of thinking . . . if mankind is to survive and move toward a higher level."

Mankind, in general less apocalyptic, scarcely knew what to think or do. Most of them were inclined to accept the bomb stolidly—like an earthquake, an act of God. Few were even yet willing to accept Oswald Spengler's bracing pessimism about the age: "There is no question of prudent retreat or wise renunciation. Only dreamers believe that there is a way out. Optimism is cowardice." But there was a growing sense that the Brothers de Goncourt had been grimly farsighted when they wrote in their *Journal* (in 1870):

They were saying that Berthelot had predicted that a hundred years from now, thanks to physical and chemical science, men would know of what the atom is constituted. . . . To all this we raised no objection, but we have the feeling that when this time comes in science, God with His white beard will come down to earth, swinging a bunch of keys, and will say to humanity, the way they say at 5 o'clock at the Salon, "Closing time, gentlemen."

RELIGION AND SCIENCE¹

Alfred North Whitehead

THE difficulty in approaching the question of the relations between Religion and Science is, that its elucidation requires that we have in our minds some clear idea of what we mean by either of the terms, 'religion' and 'science.' Also I wish to speak in the most general way possible, and to keep in the background any comparison of particular creeds, scientific or religious. We have got to understand the type of connection which exists between the two spheres, and then to draw some definite conclusions respecting the existing situation which at present confronts the world.

The *conflict* between religion and science is what naturally occurs to our minds when we think of this subject. It seems as though, during the last half-century, the results of science and the beliefs of religion had come into a position of frank disagreement, from which there can be no escape, except by abandoning either the clear teaching of science, or the clear teaching of religion. This conclusion has been urged by controversialists on either side. Not by all controversialists, of course, but by those trenchant intellects which every controversy calls out into the open.

The distress of sensitive minds, and the zeal for truth, and the sense of

¹From *Science and the Modern World*, by Alfred North Whitehead (1941). By permission of The Macmillan Company, publishers.

the importance of the issues, must command our sincerest sympathy. When we consider what religion is for mankind, and what science is, it is no exaggeration to say that the future course of history depends upon the decision of this generation as to the relations between them. We have here the two strongest general forces (apart from the mere impulse of the various senses) which influence men, and they seem to be set one against the other—the force of our religious intuitions, and the force of our impulse to accurate observation and logical deduction.

A great English statesman once advised his countrymen to use large-scale maps, as a preservative against alarms, panics, and general misunderstanding of the true relations between nations. In the same way in dealing with the clash between permanent elements of human nature, it is well to map our history on a large scale, and to disengage ourselves from our immediate absorption in the present conflicts. When we do this, we immediately discover two great facts. In the first place, there has always been a conflict between religion and science; and in the second place, both religion and science have always been in a state of continual development. In the early days of Christianity, there was a general belief among Christians that the world was coming to an end in the lifetime of people then living. We can make only indirect inferences as to how far this belief was authoritatively proclaimed; but it is certain that it was widely held, and that it formed an impressive part of the popular religious doctrine. This belief proved itself to be mistaken, and Christian doctrine adjusted itself to the change. Again in the early Church individual theologians very confidently deduced from the Bible opinions concerning the nature of the physical universe. In the year A.D. 535, a monk named Cosmas wrote a book which he entitled, *Christian Topography*. He was a travelled man who had visited India and Ethiopia; and finally he lived in a monastery at Alexandria, which was then a great centre of culture. In this book, basing himself upon the direct meaning of Biblical texts as construed by him in a literal fashion, he denied the existence of the antipodes, and asserted that the world is a flat parallelogram whose length is double its breadth.

In the seventeenth century the doctrine of the motion of the earth was condemned by a Catholic tribunal. A hundred years ago the extension of time demanded by geological science distressed religious people, Protestant and Catholic. And to-day the doctrine of evolution is an equal stumbling-block. These are only a few instances illustrating a general fact.

But all our ideas will be in a wrong perspective if we think that this recurring perplexity was confined to contradictions between religion and science; and that in these controversies religion was always wrong, and that

science was always right. The true facts of the case are very much more complex, and refuse to be summarized in these simple terms.

Theology itself exhibits exactly the same character of gradual development, arising from an aspect of conflict between its own proper ideas. This fact is a commonplace to theologians, but is often obscured in the stress of controversy. I do not wish to overstate my case; so I will confine myself to Roman Catholic writers. In the seventeenth century a learned Jesuit, Father Petavius, showed that the theologians of the first three centuries of Christianity made use of phrases and statements which since the fifth century would be condemned as heretical. Also Cardinal Newman devoted a treatise to the discussion of the development of doctrine. He wrote it before he became a great Roman Catholic ecclesiastic; but throughout his life, it was never retracted and continually reissued.

Science is even more changeable than theology. No man of science could subscribe without qualification to Galileo's beliefs, or to Newton's beliefs, or to all his own scientific beliefs of ten years ago.

In both regions of thought, additions, distinctions, and modifications have been introduced. So that now, even when the same assertion is made to-day as was made a thousand, or fifteen hundred years ago, it is made subject to limitations or expansions of meaning, which were not contemplated at the earlier epoch. We are told by logicians that a proposition must be either true or false, and that there is no middle term. But in practice, we may know that a proposition expresses an important truth, but that it is subject to limitations and qualifications which at present remain undiscovered. It is a general feature of our knowledge, that we are insistently aware of important truths; and yet that the only formulations of these truths which we are able to make presuppose a general standpoint of conceptions which may have to be modified. I will give you two illustrations, both from science: Galileo said that the earth moves and that the sun is fixed; the Inquisition said that the earth is fixed and the sun moves; and Newtonian astronomers, adopting an absolute theory of space, said that both the sun and the earth move. But now we say that any one of these three statements is equally true, provided that you have fixed your sense of 'rest' and 'motion' in the way required by the statement adopted. At the date of Galileo's controversy with the Inquisition, Galileo's way of stating the facts was, beyond question, the fruitful procedure for the sake of scientific research. But in itself it was not more true than the formulation of the Inquisition. But at that time the modern concepts of relative motion were in nobody's mind; so that the statements were made in ignorance of the qualifications required for their more perfect truth. Yet this question of the motions of the earth and the sun expresses a real fact

in the universe; and all sides had got hold of important truths concerning it. But with the knowledge of those times, the truths appeared to be inconsistent.

Again I will give you another example taken from the state of modern physical science. Since the time of Newton and Huyghens in the seventeenth century there have been two theories as to the physical nature of light. Newton's theory was that a beam of light consists of a stream of very minute particles, or corpuscles, and that we have the sensation of light when these corpuscles strike the retinas of our eyes. Huyghens' theory was that light consists of very minute waves of trembling in an all-pervading ether, and that these waves are travelling along a beam of light. The two theories are contradictory. In the eighteenth century Newton's theory was believed, in the nineteenth century Huyghens' theory was believed. To-day there is one large group of phenomena which can be explained only on the wave theory, and another large group which can be explained only on the corpuscular theory. Scientists have to leave it at that, and wait for the future, in the hope of attaining some wider vision which reconciles both.

We should apply these same principles to the questions in which there is a variance between science and religion. We would believe nothing in either sphere of thought which does not appear to us to be certified by solid reasons based upon the critical research either of ourselves or of competent authorities. But granting that we have honestly taken this precaution, a clash between the two on points of detail where they overlap should not lead us hastily to abandon doctrines for which we have solid evidence. It may be that we are more interested in one set of doctrines than in the other. But, if we have any sense of perspective and of the history of thought, we shall wait and refrain from mutual anathemas.

We should wait: but we should not wait passively, or in despair. The clash is a sign that there are wider truths and finer perspectives within which a reconciliation of a deeper religion and a more subtle science will be found.

In one sense, therefore, the conflict between science and religion is a slight matter which has been unduly emphasized. A mere logical contradiction cannot in itself point to more than the necessity of some readjustments, possibly of a very minor character on both sides. Remember the widely different aspects of events which are dealt with in science and in religion respectively. Science is concerned with the general conditions which are observed to regulate physical phenomena; whereas religion is wholly wrapped up in the contemplation of moral and aesthetic values. On the one side there is the law of gravitation, and on the other the contemplation of the beauty of holiness. What one side sees, the other misses; and vice versa.

Consider, for example, the lives of John Wesley and of Saint Francis of

Assisi. For physical science you have in these lives merely ordinary examples of the operation of the principles of physiological chemistry, and of the dynamics of nervous reactions: for religion you have lives of the most profound significance in the history of the world. Can you be surprised that, in the absence of a perfect and complete phrasing of the principles of science and of the principles of religion which apply to these specific cases, the accounts of these lives from these divergent standpoints should involve discrepancies? It would be a miracle if it were not so.

It would, however, be missing the point to think that we need not trouble ourselves about the conflict between science and religion. In an intellectual age there can be no active interest which puts aside all hope of a vision of the harmony of truth. To acquiesce in discrepancy is destructive of candor, and of moral cleanliness. It belongs to the self-respect of intellect to pursue every tangle of thought to its final unravelment. If you check that impulse, you will get no religion and no science from an awakened thoughtfulness. The important question is, In what spirit are we going to face the issue? There we come to something absolutely vital.

A clash of doctrines is not a disaster—it is an opportunity. I will explain my meaning by some illustrations from science. The weight of an atom of nitrogen was well known. Also it was an established scientific doctrine that the average weight of such atoms in any considerable mass will be always the same. Two experimenters, the late Lord Rayleigh and the late Sir William Ramsay, found that if they obtained nitrogen by two different methods, each equally effective for that purpose, they always observed a persistent slight difference between the average weights of the atoms in the two cases. Now I ask you, would it have been rational of these men to have despaired because of this conflict between chemical theory and scientific observation? Suppose that for some reason the chemical doctrine had been highly prized throughout some district as the foundation of its social order:—would it have been wise, would it have been candid, would it have been moral, to forbid the disclosure of the fact that the experiments produced discordant results? Or, on the other hand, should Sir William Ramsay and Lord Rayleigh have proclaimed that chemical theory was now a detected delusion? We see at once that either of these ways would have been a method of facing the issue in an entirely wrong spirit. What Rayleigh and Ramsay did was this: They at once perceived that they had hit upon a line of investigation which would disclose some subtlety of chemical theory that had hitherto eluded observation. The discrepancy was not a disaster: it was an opportunity to increase the sweep of chemical knowledge. You all know the end of the story: finally argon was discovered, a new chemical element which had lurked undetected,

mixed with the nitrogen. But the story has a sequel which forms my second illustration. This discovery drew attention to the importance of observing accurately minute differences in chemical substances as obtained by different methods. Further researches of the most careful accuracy were undertaken. Finally another physicist, F. W. Aston, working in the Cavendish Laboratory at Cambridge in England, discovered that even the same element might assume two or more distinct forms, termed *isotopes*, and that the law of the constancy of average atomic weight holds for each of these forms, but as between the different isotopes differs slightly. The research has effected a great stride in the power of chemical theory, far transcending in importance the discovery of argon from which it originated. The moral of these stories lies on the surface, and I will leave to you their application to the case of religion and science.

In formal logic, a contradiction is the signal of a defeat: but in the evolution of real knowledge it marks the first step in progress towards a victory. This is one great reason for the utmost toleration of variety of opinion. Once and forever, this duty of toleration has been summed up in the words, 'Let both grow together until the harvest.' The failure of Christians to act up to this precept, of the highest authority, is one of the curiosities of religious history. But we have not yet exhausted the discussion of the moral temper required for the pursuit of truth. There are short cuts leading merely to an illusory success. It is easy enough to find a theory, logically harmonious and with important applications in the region of fact, provided that you are content to disregard half your evidence. Every age produces people with clear logical intellects, and with the most praiseworthy grasp of the importance of some sphere of human experience, who have elaborated, or inherited, a scheme of thought which exactly fits those experiences which claim their interest. Such people are apt resolutely to ignore, or to explain away, all evidence which confuses their scheme with contradictory instances. What they cannot fit in is for them nonsense. An unflinching determination to take the whole evidence into account is the only method of preservation against the fluctuating extremes of fashionable opinion. This advice seems so easy, and is in fact so difficult to follow.

One reason for this difficulty is that we cannot think first and act afterwards. From the moment of birth we are immersed in action, and can only fitfully guide it by taking thought. We have, therefore, in various spheres of experience to adopt those ideas which seem to work within those spheres. It is absolutely necessary to trust to ideas which are generally adequate, even though we know that there are subtleties and distinctions beyond our ken. Also apart from the necessities of action, we cannot even keep before our

minds the whole evidence except under the guise of doctrines which are incompletely harmonized. We cannot think in terms of an indefinite multiplicity of detail; our evidence can acquire its proper importance only if it comes before us marshalled by general ideas. These ideas we inherit—they form the tradition of our civilization. Such traditional ideas are never static. They are either fading into meaningless formulae, or are gaining power by the new lights thrown by a more delicate apprehension. They are transformed by the urge of critical reason, by the vivid evidence of emotional experience, and by the cold certainties of scientific perception. One fact is certain, you cannot keep them still. No generation can merely reproduce its ancestors. You may preserve the life in a flux of form, or preserve the form amid an ebb of life. But you cannot permanently enclose the same life in the same mould.

The present state of religion among the European races illustrates the statements which I have been making. The phenomena are mixed. There have been reactions and revivals. But on the whole, during many generations, there has been a gradual decay of religious influence in European civilization. Each revival touches a lower peak than its predecessor, and each period of slackness a lower depth. The average curve marks a steady fall in religious tone. In some countries the interest in religion is higher than in others. But in those countries where the interest is relatively high, it still falls as the generations pass. Religion is tending to degenerate into a decent formula wherewith to embellish a comfortable life. A great historical movement on this scale results from the convergence of many causes. I wish to suggest two of them which lie within the scope of this chapter for consideration.

In the first place for over two centuries religion has been on the defensive, and on a weak defensive. The period has been one of unprecedented intellectual progress. In this way a series of novel situations have been produced for thought. Each such occasion has found the religious thinkers unprepared. Something, which has been proclaimed to be vital, has finally, after struggle, distress, and anathema, been modified and otherwise interpreted. The next generation of religious apologists then congratulates the religious world on the deeper insight which has been gained. The result of the continued repetition of this undignified retreat, during many generations, has at last almost entirely destroyed the intellectual authority of religious thinkers. Consider this contrast: when Darwin or Einstein proclaim theories which modify our ideas, it is a triumph for science. We do not go about saying that there is another defeat for science, because its old ideas have been abandoned. We know that another step of scientific insight has been gained.

Religion will not regain its old power until it can face change in the

same spirit as does science. Its principles may be eternal, but the expression of those principles requires continual development. This evolution of religion is in the main a disengagement of its own proper ideas from the adventitious notions which have crept into it by reason of the expression of its own ideas in terms of the imaginative picture of the world entertained in previous ages. Such a release of religion from the bonds of imperfect science is all to the good. It stresses its own genuine message. The great point to be kept in mind is that normally an advance in science will show that statements of various religious beliefs require some sort of modification. It may be that they have to be expanded or explained, or indeed entirely restated. If the religion is a sound expression of truth, this modification will only exhibit more adequately the exact point which is of importance. This process is a gain. In so far, therefore, as any religion has any contact with physical facts, it is to be expected that the point of view of those facts must be continually modified as scientific knowledge advances. In this way, the exact relevance of these facts for religious thought will grow more and more clear. The progress of science must result in the unceasing codification of religious thought, to the great advantage of religion.

The religious controversies of the sixteenth and seventeenth centuries put theologians into a most unfortunate state of mind. They were always attacking and defending. They pictured themselves as the garrison of a fort surrounded by hostile forces. All such pictures express half-truths. That is why they are so popular. But they are dangerous. This particular picture fostered a pugnacious party spirit which really expresses an ultimate lack of faith. They dared not modify, because they shirked the task of disengaging their spiritual message from the associations of a particular imagery.

Let me explain myself by an example. In the early medieval times, Heaven was in the sky, and Hell was underground; volcanoes were the jaws of Hell. I do not assert that these beliefs entered into the official formulations: but they did enter into the popular understanding of the general doctrines of Heaven and Hell. These notions were what everyone thought to be implied by the doctrine of the future state. They entered into the explanations of the influential exponents of Christian belief. For example, they occur in the *Dialogues* of Pope Gregory, the Great, a man whose high official position is surpassed only by the magnitude of his services to humanity. I am not saying what we ought to believe about the future state. But whatever be the right doctrine, in this instance the clash between religion and science, which has relegated the earth to the position of a second-rate planet attached to a second-rate sun, has been greatly to the benefit of the spirituality of religion by dispersing these medieval fancies.

Another way of looking at this question of the evolution of religious thought is to note that any verbal form of statement which has been before the world for some time discloses ambiguities; and that often such ambiguities strike at the very heart of the meaning. The effective sense in which a doctrine has been held in the past cannot be determined by the mere logical analysis of verbal statements, made in ignorance of the logical trap. You have to take into account the whole reaction of human nature to the scheme of thought. This reaction is of a mixed character, including elements of emotion derived from our lower natures. It is here that the impersonal criticism of science and of philosophy comes to the aid of religious evolution. Example after example can be given of this motive force in development. For example, the logical difficulties inherent in the doctrine of the moral cleansing of human nature by the power of religion rent Christianity in the days of Pelagius and Augustine—that is to say, at the beginning of the fifth century. Echoes of that controversy still linger in theology.

So far, my point has been this: that religion is the expression of one type of fundamental experiences of mankind: that religious thought develops into an increasing accuracy of expression, disengaged from adventitious imagery: that the interaction between religion and science is one great factor in promoting this development.

I now come to my second reason for the modern fading of interest in religion. This involves the ultimate question which I stated in my opening sentences. We have to know what we mean by religion. The churches, in their presentation of their answers to this query, have put forward aspects of religion which are expressed in terms either suited to the emotional reactions of bygone times or directed to excite modern emotional interests of non-religious character. What I mean under the first heading is that religious appeal is directed partly to excite that instinctive fear of the wrath of a tyrant which was inbred in the unhappy populations of the arbitrary empires of the ancient world, and in particular to excite that fear of an all-powerful arbitrary tyrant behind the unknown forces of nature. This appeal to the ready instinct of brute fear is losing its force. It lacks any directness of response, because modern science and modern conditions of life have taught us to meet occasions of apprehension by a critical analysis of their causes and conditions. Religion is the reaction of human nature to its search for God. The presentation of God under the aspect of power awakens every modern instinct of critical reaction. This is fatal; for religion collapses unless its main positions command immediacy of assent. In this respect the old phraseology is at variance with the psychology of modern civilizations. This change in psychology is largely due to science, and is one of the chief ways in which

the advance of science has weakened the hold of the old religious forms of expression. The non-religious motive which has entered into modern religious thought is the desire for a comfortable organization of modern society. Religion has been presented as valuable for the ordering of life. Its claims have been rested upon its function as a sanction to right conduct. Also the purpose of right conduct quickly degenerates into the formation of pleasing social relations. We have here a subtle degradation of religious ideas, following upon their gradual purification under the influence of keener ethical intuitions. Conduct is a by-product of religion—an inevitable by-product, but not the main point. Every great religious teacher has revolted against the presentation of religion as a mere sanction of rules of conduct. Saint Paul denounced the Law, and Puritan divines spoke of the filthy rags of righteousness. The insistence upon rules of conduct marks the ebb of religious fervor. Above and beyond all things, the religious life is not a research after comfort. I must now state, in all diffidence, what I conceive to be the essential character of the religious spirit.

Religion is the vision of something which stands beyond, behind, and within, the passing flux of immediate things; something which is real, and yet waiting to be realized; something which is a remote possibility, and yet the greatest of present facts; something that gives meaning to all that passes, and yet eludes apprehension; something whose possession is the final good, and yet is beyond all reach; something which is the ultimate ideal, and the hopeless quest.

The immediate reaction of human nature to the religious vision is worship. Religion has emerged into human experience mixed with the crudest fancies of barbaric imagination. Gradually, slowly, steadily the vision recurs in history under nobler form and with clearer expression. It is the one element in human experience which persistently shows an upward trend. It fades and then recurs. But when it renews its force, it recurs with an added richness and purity of content. The fact of the religious vision, and its history of persistent expansion, is our one ground for optimism. Apart from it, human life is a flash of occasional enjoyments lighting up a mass of pain and misery, a bagatelle of transient experience.

The vision claims nothing but worship; and worship is a surrender to the claim for assimilation, urged with the motive force of mutual love. The vision never overrules. It is always there, and it has the power of love presenting the one purpose whose fulfilment is eternal harmony. Such order as we find in nature is never force—it presents itself as the one harmonious adjustment of complex detail. Evil is the brute motive force of fragmentary purpose, disregarding the eternal vision. Evil is overruling, retarding, hurt-

ing. The power of God is the worship He inspires. That religion is strong which in its ritual and its modes of thought evokes an apprehension of the commanding vision. The worship of God is not a rule of safety—it is an adventure of the spirit, a flight after the unattainable. The death of religion comes with the repression of the high hope of adventure.

BLUEPRINT OF A FUTURE SUBURB¹

Waldemar Kaempffert

IT is easy to pack the future with queer machines that will dig a Panama Canal in a few months, with rocket ships that will whizz off to Venus and Mars as regularly as a four-day liner sails for Europe in normal times in our day, with attractively yet sensibly clad men and women who will stop in the middle of the street and converse with friends in cities a thousand miles away by means of extraordinarily sensitive pocket radios. This is mere romancing. Consider what we have now and it turns out that it was forecast, in a sense, generations ago.

When Watt invented the steam engine it was a foregone conclusion that some day there would be locomotives that would haul trains and ships that would be driven by steam instead of the wind. When the sewing machine was invented no clairvoyant power was required to foretell cheaper and better clothing. And when rayon came it was clear that the department stores would some day be selling clothes which would look like silk but which would be within the means of every woman. The future is now sprouting in a thousand laboratories. It can even be seen in a small way in grocery stores and bargain basements. The cans and packages of food on the grocer's shelves and the cheap costume jewelry made of plastics are arrows that point truly in the direction that the world is taking. Time is the unknown factor. If science has its way, life may change even more profoundly in the next fifty years than it has changed since the automobile and radio came. Or it may take a hundred years before the generations to come are ready to exploit the discoveries that the laboratories are making now.

Compare life today with what it was in Andrew Jackson's time, and we see at once how great is the leveling that has occurred. It is hard to be "different" now. Mass-production and mass-consumption are possible only if there are common desires and tastes. We drink water from a common

¹From *Science Today and Tomorrow*, Second Series, by Waldemar Kaempffert. Copyright 1945 by Waldemar Kaempffert, by permission of The Viking Press, Inc., New York.

reservoir, burn gas that comes from a common gasometer, use electricity that comes from a central station, read by lamps that are identical, ride in automobiles that are very much alike, listen to a radio program which is broadcast to the whole continent, laugh at a motion-picture play that appears on the screens of a hundred cities simultaneously, eat packaged and canned foods which are the same in every grocery store from New York to San Francisco. In a word we are a highly standardized people. The trend toward standardization will acquire momentum, so that as the decades slip by homes will be even more alike than they are now. It will be almost impossible to gratify a bizarre taste in clothes, food and mechanical vehicles. Let us not forget that even in our time Isadora Duncan's brother was arrested for disorderly conduct merely for walking down Fifth Avenue, clad in a decent and becoming toga. Rugged individualism is dissolving before our eyes, and with it the comprehensive household. Life will be even more machine-like in the future. Yet it will not be narrow or drab.

Begin, then, with the home of the Babcocks in Oakwood, a metropolitan suburb in the not too distant future. That home is what advanced architects call "functional," meaning that it is eminently practical in its design and in its appointments. By the time it is built much has been learned about house construction from trailers and airplanes. It is not tailormade on the site, as our houses still are, but assembled. The chemist has as much to do with its success as the architect. It is the weight and cost of building materials in the early twentieth century that makes it difficult to turn out houses in factories. Steel, stone, cement, glass, baked tiles, bricks and similar heavy material must ultimately give place to slabs of synthetic material so light that they float like cork. It is of such material that the home of the Babcocks is built. A 10-ton truck carries whole walls and floors to the site. It takes just twenty-four hours to erect all the parts, to make the necessary electrical and water connections and to install the furniture.

That house is like thousands of others, and yet it is distinctive. Its parts are all standardized, but there is no difficulty about putting the porch where it may be wanted or arranging rooms in the sequence that seems best. In fact the Babcocks can take the house down and put the kitchen on the second floor and the bedrooms all on the ground floor whenever the fancy strikes them.

If such light yet strong construction seems impossible, consider what the engineers have already done. Some of our bridges have floor-beams of aluminum alloys. Already it is possible to see a workman walk off with an aluminum girder on his shoulder, something that would have to be hoisted and conveyed by a crane if it were made of steel. With streamlined trains and airplanes built of light metals so that no useless dead weight is hauled,

a heavy steel Pullman is even now an anachronistic joke. Steel will be reserved in the future for tools. A few trucks will carry all the machinery that a powerhouse needs to light a city. The Babcock house is simply a product of early twentieth-century engineering and chemistry.

You can put your hand on a lamp in the Babcock home and feel no heat. The light is cold. If you decline to believe in this cold light look at the firefly or the bacteria that fluoresce on food in a refrigerator. Engineers have deplored the fact that we have always had to burn something or heat metal to incandescence to light a street or a home and then waste 95 per cent of the energy in the form of unwanted heat. Industrial research has given us the fluorescent lamp, which we turn on and off like any other electric lamp. But this is still inefficient compared with the firefly. "Luciferin" is the name of the chemical that causes some insects, fishes and bacteria to glow. It is bound to be isolated and then synthesized for use with a little oxygen to keep it alive. If it is ever used for illumination it is possible that the street lights of Oakwood will shine all day as well as all night. In the Babcock home, caps drop over the bulbs when light is not wanted.

The town of Oakwood is dustless because it is completely covered by a roof of transparent, unbreakable plastic. Nobody has any use within the city for umbrellas, overshoes, overcoats, snow shovels and similar necessities of our time. The whole cubic space beneath that vast roof is air-conditioned by a central municipal plant—a natural extension of our experiments in air-conditioning first single rooms, houses, restaurants and auditoriums and then whole office buildings. Despite this standardization of air-conditioning for a whole town, the Babcocks have a certain control over the climate in their home. They can pass city air through coolers or warmers if they do not like its temperature and through metal flasks of liquid synthetics that impart the odor of Norwegian pines or of the sea off Nantucket.

Weather never interferes with business or pleasure in Oakwood. When some adventurer returns from hiking in the open country he boasts of the brooks through which he splashed or the slanting rain that he buffeted. To enclose the entire town and air-condition it would have been impossible without the engineering and chemical advances that gave factory builders light, strong structural materials.

There was an acrimonious debate about that vast roof. Should it be transparent or opaque? The engineers were all for blotting out the sun and letting the street lights glow twenty-four hours a day, arguing that even back in 1925 it was more expensive to clean windows than to let electric lamps burn. In the end tradition won and the city acquired a transparent roof.

If you want to know how the Babcocks breakfast, lunch and dine you

have only to consider how most of us eat today. Look at the shelves of your own pantry and refrigerator—at the cans of vegetables and soups and fruit juices, at the potted meats, at the dehydrated soups and vegetables, at the packages of cereals, rusks and toast, at the bread delivered by the baker, at the cartons of frozen meats, fruits and vegetables. It is clear that much of our cooking is already done in the factory. Many a housewife prepares dinner for a family of five in an hour by emptying the contents of a can or a package into a pot or a pan and lighting a gas range.

All this is "socially significant" in the jargon of the professors. It means that we who live in the first half of the twentieth century are in a transition stage and that, for all the sentimental praise lavished upon the pies, bread and cake that mother used to bake, cooking is regarded as so much drudgery. The next step is clearly the preparation of ready-to-eat hot and cold dishes in the factory and their delivery into the home.

When Mrs. Babcock wants dinner she opens the Oakwood Sun at page twelve. There she studies twenty bills of fare. Having made up her mind she dials Oakwood 299, which is the number of the Consolidated Food Company, and says: "This is Channel 7564. Please send me dinner number nine on today's bill at seven o'clock." Promptly at seven a torpedo, constructed on the vacuum-bottle principle to keep hot food hot and cold food cold, drops with a thud out of a pneumatic tube upon a pantry table. Mrs. Babcock swings up the top and sees within soup, meat, sauces, salad, dessert, a flask of coffee, sugar, pepper, knives, forks, spoons, dishes. She serves the separate courses on plastic ware which costs about 10 cents a meal for a family of five. After dinner she sends the cutlery and plastic dishes back to the Consolidated Food Company. Not that the dishes will be used over again—they have been scratched by cutlery—but that they will be sold to some chemical manufacturer to be melted up. Mrs. Babcock receives a credit of 2 cents.

That dinner is partly synthetic. The vegetables are "real," because they cannot be created in the laboratories at a reasonable cost. But the meat will not come from some slaughterhouse. Yet there is something that looks like roast beef, with deceptive "bones," or a roast turkey.

If beef looks like beef and turkey like turkey it is because the Babcocks respect the past as much as we do. It is the past that lights the Christmas tree today, because the tree was handed down by pre-Christian pagans. Thanksgiving is still Thanksgiving to the Babcocks, and something molded in the form of a bird, with a rich brown skin and drumsticks, though conventionalized, is eaten on that day in accordance with the old ritual.

It takes no gift of divination to foretell that this dinner has been prepared by chemists and not by empirical cooks. The articles that we read now about

calories and vitamins can mean nothing else. At present the chemists content themselves with telling us what kind of food we should eat to keep healthy and leave to us the addition of mineral salts and the vitamins that we cook out of foods. The next step is clearly the preparation of meals by trained scientists, who will never taste a dish but who will compound it as a druggist compounds a prescription.

There are periodicals and newspapers in the Babcock house, but no books. The family has a library of 10,000 reels of microfilm on which the world's best literature has been photographed. When Mr. Babcock wants to look up the statistics on China's output of synthetic ivory he slips the proper film into a projection machine and reads the tables and descriptive text on an inclined screen about the size of one of our window panes. A twenty-nine-volume encyclopedia takes up no more room than a cigar box. A fat dictionary can be carried in a hip pocket. The whole library of 10,000 films is stowed away in the drawers of the projection machine. Newspaper offices are now reducing annual bound volumes of news to a few cubic inches, and the United States Census Bureau is similarly clearing whole rooms of crumbling, faded population records. The Babcocks are deriving the full benefit of our experiments in space-saving.

Of course there is a television set, with a whole properly treated wall to serve as a screen, so that actors who happen to be playing in an all-star company in Paris or London appear lifesize. Mrs. Babcock shops by the same television set. Goods are held up for her inspection and their merits and defects are discussed. The wall also serves as a screen for motion pictures. News is printed in the home on yards of paper by the combined television and radio set in accordance with principles that inventors were developing back in 1936. When Mr. Babcock wants to write a letter at home or in his office, he talks to a voice typewriter—a development of a crude machine that John Flowers had conceived and tried out back in the Nineteen Twenties. Because the pronunciation of many words, such as "dough" and "tough," "water" and "daughter," is not reconcilable with their printed appearance the machine writes phonetically.

There is no soap in the Babcock household. When Mr. Babcock takes his shower he turns on a stream of detergent that dissolves the few bits of dirt that may cling to his skin. He dries himself with a blast of hot air. The only razor he ever saw was his grandfather's. He treasures it as an heirloom. He shaves by rubbing a depilatory liquid on his face and thus removes all hair in about fifteen seconds.

How do the Babcocks dress? Most prophets see them wearing very sensible, cheap clothes and throwing them away after a week's wear. The

cheapness of the clothes is more easily accepted than the change in human nature. If the history of the human race from caveman to Park Avenue means anything it means that fashion is followed in Oakwood just as it was in New York of 1940. It is certain that the Babcocks are farther from nature in the matter of clothes than we. In other words they do not clothe themselves in fabrics made of such natural vegetable and animal fibers as cotton and wool. Where we have only three or four synthetic fibers the Babcocks have a hundred. Instead of wool, blankets will be made of aerogels—glass puffed up with air and light as thistledown. Mrs. Babcock dresses herself in aerogels for dances. Cleaning her evening gown presents no difficulties. She dips it into water and sponges it.

It is one of the characteristic illogicalities of our own fairly mechanized society that we burn candles on dinner tables and glory in the possession of antiques. Despite the prophecies of H. G. Wells and others who have pictured the shape of things to come the Babcocks are just as illogical as we are. They pay high prices at auctions for our more hideous steam radiators (the rustier the better), preposterous lighting fixtures, electric curling irons, toasters and vacuum cleaners and furnish a period room with them, all in an effort to recapture the quaintness of 1930 and 1940. It takes more time and labor to keep that period room in order than all the rest of the house.

Travel is the chief recreation of the Babcocks and others like them. Nobody in Oakwood thinks anything of spending a weekend in the Argentine or the Himalayas or dining one evening in Paris and turning up at the office on time the next morning. Planes cleave the stratosphere, where there are no winds and where the weather is always fine. Our so-called stratosphere planes fly merely at the upper levels of the thick, turbulent, resistant dregs of air in which we live and breathe. A thousand miles an hour is the regular speed of the great airliners of the future, which means that they are able to fly around the earth in twenty-four hours and keep pace with the sun. To reach their flying lane they must climb up 10 miles, for which reasons their cabins are hermetically sealed and supplied with air at the proper temperature and pressure. For private use there are helicopters, which rise straight up, and airplanes with speeds of 400 miles an hour.

The automobiles in the Babcock garage are faster than ours. From this in turn it follows that roads are straighter, wider and even smoother than ours. Because of speeds that reach 150 miles an hour traffic control is elaborate. A traffic controller in a high tower keeps a vigilant eye on the road. Every car must carry a radio set. "You in the green limousine, license number XY-2465, watch the block signals," the controller warns, and his words are heard by the careless driver as they well out of the loudspeaker on the car.

There are railways still, for the simple reason that there is no way of carrying freight and hundreds of passengers overland so cheaply as by train. But there are no panting, smoking locomotives. Trains are driven electrically, as some of them are now. Moreover they run on single rails with wheels arranged in tandem. The patent records are cluttered now with descriptions of such high-speed monorailway systems. What keeps them standing when they stop at a station? A gyroscope, which is nothing but a sort of spinning top. Every boy has tried to push a spinning top over, only to see it stubbornly rise to its vertical position. When a monorail train at a station tries to fall over, a few gyroscopes pull it back.

It is impossible to list here all the machines which have already been conceived in principle and for which the future will have better use than we. Musical instruments will be collections of vacuum tubes, which will synthesize any sound whether it is the wail of a violin or the whistle of a piccolo, the ruffle of a drum or the blare of trumpets. In factories machines will make other machines, with only a few men standing around to watch for breakdowns. In department stores machines will select bolts of cloth, jewelry, utensils and carry them for examination to a counter from some remote stockroom. Bookkeeping will be even more mechanical than it is now, with photoelectric cells running an eye over accounts, calling attention to those that are overdue and even ordering machines to write form dunning letters. Problems in higher mathematics will be solved by machines which will be elaborations of those we have today. Whole mountains will be torn down and crushed for their copper, tin and nickel.

Turn whither we will and we see an ever-increasing dependence on the machine and hence on power. Even today a minor catastrophe occurs when lightning strikes a powerplant and short-circuits the electric machinery. Lights go out, percolators stop brewing coffee, ice cubes melt in the refrigerator, slices of bread remain a pale brown in their toasters, trolley cars stop, a whole city is paralyzed. What distinguishes this culture of ours is its use of power and through the use of power its control of the environment. The primeval world not being good enough, engineers and chemists have been changing it ever since they had power. Steamheated apartments instead of caves, electric lights instead of the moon or a fire, railway trains and airplanes instead of muscles, water out of a distant reservoir from a tap instead of a well, woven fabrics instead of skins—we have progressed far with power in twenty thousand years. Give him more power, cheaper power and the engineer will fashion the planet to suit society. We may cry "back to nature" as loudly as we please, but the scientist within us answers "forward to the laboratory and the machine."

America and the World Order

FIRST INAUGURAL ADDRESS • THOMAS JEFFERSON

UTILITY OF UNION • ALEXANDER HAMILTON

THE GENERAL ORDER OF THE NATIONS • WALTER LIPPMANN

A JOB TO BE DONE • VERA MICHELES DEAN

THE REAL PROBLEM IS IN THE HEARTS OF MEN • ALBERT EINSTEIN

FIRST INAUGURAL ADDRESS

Thomas Jefferson

FRIENDS AND FELLOW-CITIZENS: Called upon to undertake the duties of the first executive office of our country, I avail myself of the presence of that portion of my fellow-citizens which is here assembled to express my grateful thanks for the favor with which they have been pleased to look toward me, to declare a sincere consciousness that the task is above my talents, and that I approach it with those anxious and awful presentiments which the greatness of the charge and the weakness of my powers so justly inspire. A rising nation, spread over a wide and fruitful land, traversing all the seas with the rich productions of their industry, engaged in commerce with nations who feel power and forget right, advancing rapidly to destinies beyond the reach of mortal eye—when I contemplate these transcendent objects, and see the honor, the happiness, and the hopes of this beloved country committed to the issue and the auspices of this day, I shrink from the contemplation, and humble myself before the magnitude of the undertaking. Utterly, indeed, should I despair did not the presence of many whom I here see remind me that in the other high authorities provided by our Constitution I shall find resources of wisdom, of virtue, and of zeal on which to rely under all difficulties. To you, then, gentlemen, who are charged with the sovereign functions of legislation, and to those associated with you, I look with encouragement for that guidance and support which may enable us to steer with safety the vessel in which we are all embarked amidst the conflicting elements of a troubled world.

During the contest of opinion through which we have passed, the animation of discussion and of exertions has sometimes worn an aspect which might impose on strangers unused to think freely and to speak and to write what they think; but this being now decided by the voice of the nation, announced according to the rules of the Constitution, all will, of course, arrange themselves under the will of the law, and unite in common efforts for the common good. All, too, will bear in mind this sacred principle, that though the will of the majority is in all cases to prevail, that will, to be rightful, must be reasonable; that the minority possess their equal rights, which equal law must protect, and to violate which would be oppression. Let us, then, fellow-citizens, unite with one heart and one mind. Let us restore to social intercourse that harmony and affection without which liberty and even life itself are but dreary things. And let us reflect that, having banished from our land that religious intolerance under which mankind so long bled and suffered, we have yet gained little if we countenance a political

intolerance as despotic, as wicked, and capable of as bitter and bloody persecutions. During the throes and convulsions of the ancient world, during the agonizing spasms of infuriated man seeking through blood and slaughter his long-lost liberty, it was not wonderful that the agitation of the billows should reach even this distant and peaceful shore; that this should be more felt and feared by some and less by others, and should divide opinions as to measures of safety. But every difference of opinion is not a difference of principle. We have called by different names brethren of the same principle. We are all Republicans, we are all Federalists. If there be any among us who would wish to dissolve this Union or to change its republican form, let them stand undisturbed as monuments of the safety with which error of opinion may be tolerated where reason is left free to combat it. I know, indeed, that some honest men fear that a republican government cannot be strong, that this Government is not strong enough; but would the honest patriot, in the full tide of successful experiment, abandon a government which has so far kept us free and firm, on the theoretic and visionary fear that this Government, the world's best hope, may by possibility want energy to preserve itself? I trust not. I believe this, on the contrary, the strongest Government on earth. I believe it the only one where every man, at the call of the law, would fly to the standard of the law, and would meet invasions of the public order as his own personal concern. Sometimes it is said that man cannot be trusted with the government of himself. Can he, then, be trusted with the government of others? Or have we found angels in the forms of kings to govern him? Let history answer this question.

Let us, then, with courage and confidence pursue our own Federal and Republican principles, our attachment to union and representative government. Kindly separated by nature and a wide ocean from the exterminating havoc of one quarter of the globe; too high-minded to endure the degradations of the others; possessing a chosen country, with room enough for our descendants to the thousandth and thousandth generation; entertaining a due sense of our equal right to the use of our own faculties, to the acquisitions of our own industry, to honor and confidence from our fellow-citizens, resulting not from birth, but from our actions and their sense of them; enlightened by a benign religion, professed, indeed, and practiced in various forms, yet all of them inculcating honesty, truth, temperance, gratitude, and the love of man; acknowledging and adoring an overruling Providence, which by all its dispensations proves that it delights in the happiness of man here and his greater happiness hereafter—with all these blessings, what more is necessary to make us a happy and a prosperous people? Still one thing more, fellow-citizens—a wise and frugal Government, which shall restrain men from

injuring one another, shall leave them otherwise free to regulate their own pursuits of industry and improvement, and shall not take from the mouth of labor the bread it has earned. This is the sum of good government, and this is necessary to close the circle of our felicities.

About to enter, fellow-citizens, on the exercise of duties which comprehend everything dear and valuable to you, it is proper that you should understand what I deem the essential principle of our Government, and consequently those which ought to shape its Administration. I will compress them within the narrowest compass they will bear, stating the general principle, but not all its limitations. Equal and exact justice to all men, of whatever state or persuasion, religious or political; peace, commerce, and honest friendship with all nations, entangling alliances with none; the support of the State governments in all their rights, as the most competent administrations for our domestic concerns and the surest bulwarks against anti-republican tendencies; the preservation of the Central Government in its whole constitutional vigor, as the sheet anchor of our peace at home and safety abroad; a jealous care of the right of election by the people—a mild and safe corrective of abuses which are lopped by the sword of revolution where peaceable remedies are unprovided; absolute acquiescence in the decisions of the majority, the vital principle of republics, from which is no appeal but to force, the vital principle and immediate parent of despotism; a well-disciplined militia, our best reliance in peace and for the first moments of war, till regulars may relieve them; the supremacy of the civil over the military authority; economy in the public expense, that labor may be lightly burthened; the honest payment of our debts and sacred preservation of the public faith; encouragement of agriculture, and of commerce as its handmaid; the diffusion of information and the arraignment of all abuses at the bar of the public reason; freedom of religion; freedom of the press, and freedom of person under the protection of the habeas corpus; and trial by juries impartially selected. These principles form the bright constellation which has gone before us and guided our steps through an age of revolution and reformation. The wisdom of our sages and blood of our heroes have been devoted to their attainment. They should be the creed of our political faith, the text of civic instruction, the touchstone by which to try the services of those we trust; and should we wander from them in moments of error or of alarm, let us hasten to retrace our steps and to regain the road which alone leads to peace, liberty, and safety.

I repair, then, fellow-citizens, to the post you have assigned me. With experience enough in subordinate offices to have seen the difficulties of this, the greatest of all, I have learnt to expect that it will rarely fall to the lot

of imperfect man to retire from this station with the reputation and the favor which bring him into it. Without pretensions to that high confidence you reposed in our first and greatest revolutionary character, whose preëminent services had entitled him to the first place in his country's love and destined for him the fairest page in the volume of faithful history, I ask so much confidence only as may give firmness and effect to the legal administration of your affairs. I shall often go wrong through defect of judgment. When right, I shall often be thought wrong by those whose positions will not command a view of the whole ground. I ask your indulgence for my own errors, which will never be intentional, and your support against the errors of others, who may condemn what they would not if seen in all its parts. The approbation implied by your suffrage is a great consolation to me for the past, and my future solicitude will be to retain the good opinion of those who have bestowed it in advance, to conciliate that of others by doing them all the good in my power, and to be instrumental to the happiness and freedom of all.

Relying, then, on the patronage of your good-will, I advance with obedience to the work, ready to retire from it whenever you become sensible how much better choice it is in your power to make. And may that Infinite Power which rules the destinies of the universe lead our councils to what is best, and give them a favorable issue for your peace and prosperity.

UTILITY OF UNION¹

Alexander Hamilton

TO THE PEOPLE OF THE STATE OF NEW YORK: The importance of the Union, in a commercial light, is one of those points about which there is least room to entertain a difference of opinion, and which has, in fact, commanded the most general assent of men who have any acquaintance with the subject. This applies as well to our intercourse with foreign countries as with each other.

There are appearances to authorize a supposition that the adventurous spirit which distinguishes the commercial character of America has already excited uneasy sensations in several of the maritime powers of Europe. They seem to be apprehensive of our too great interference in that carrying trade which is the support of their navigation and the foundation of their naval

¹From the *Federalist*, 1787, Paper No. 11.

strength. Those of them which have colonies in America look forward to what this country is capable of becoming, with painful solicitude. They foresee the dangers that may threaten their American dominions from the neighborhood of States which have all the dispositions, and would possess all the means, requisite to the creation of a powerful marine. Impressions of this kind will naturally indicate the policy of fostering divisions among us, and of depriving us, as far as possible, of an ACTIVE COMMERCE in our own bottoms. This would answer the threefold purpose of preventing our interference in their navigation, of monopolizing the profits of our trade, and of clipping the wings by which we might soar to a dangerous greatness. Did not prudence forbid the detail, it would not be difficult to trace, by facts, the workings of this policy to the cabinets of ministers.

If we continue united, we may counteract a policy so unfriendly to our prosperity in a variety of ways. By prohibitory regulations extending at the same time throughout the States, we may oblige foreign countries to bid against each other for the privileges of our markets. This assertion will not appear chimerical to those who are able to appreciate the importance of the markets of three millions of people—increasing in rapid progression, for the most part exclusively addicted to agriculture, and likely from local circumstances to remain so—to any manufacturing nation; and the immense difference there would be to the trade and navigation of such a nation, between a direct communication in its own ships, and an indirect conveyance of its products and returns, to and from America, in the ships of another country. Suppose, for instance, we had a government in America capable of excluding Great Britain (with whom we have at present no treaty of commerce) from all our ports; what would be the probable operation of this step upon her politics? Would it not enable us to negotiate, with the fairest prospect of success, for commercial privileges of the most valuable and extensive kind in the dominions of that kingdom? When these questions have been asked upon other occasions, they have received a plausible, but not a solid or satisfactory answer. It has been said that prohibitions on our part would produce no change in the system of Britain, because she could prosecute her trade with us through the medium of the Dutch, who would be her immediate customers and paymasters for those articles which were wanted for the supply of our markets. But would not her navigation be materially injured by the loss of the important advantage of being her own carrier in that trade? Would not the principal part of its profits be intercepted by the Dutch, as a compensation for their agency and risk? Would not the mere circumstance of freight occasion a considerable deduction? Would not so circuitous an intercourse facilitate the competitions of other nations, by en-

hancing the price of British commodities in our markets, and by transferring to other hands the management of this interesting branch of the British commerce?

A mature consideration of the objects suggested by these questions will justify a belief that the real disadvantages to Britain from such a state of things, conspiring with the prepossessions of a great part of the nation in favor of the American trade, and with the importunities of the West India Islands, would produce a relaxation in her present system, and would let us into the enjoyment of privileges in the markets of those islands and elsewhere, from which our trade would derive the most substantial benefits. Such a point gained from the British government, and which could not be expected without an equivalent in exemptions and immunities in our markets, would be likely to have a correspondent effect on the conduct of other nations, who would not be inclined to see themselves altogether supplanted in our trade.

A further resource for influencing the conduct of European nations toward us, in this respect, would arise from the establishment of a federal navy. There can be no doubt that the continuance of the Union under an efficient government would put it in our power, at a period not very distant, to create a navy which, if it could not vie with those of the great maritime powers, would at least be of respectable weight if thrown into the scale of either of two contending parties. This would be more peculiarly the case in relation to operations in the West Indies. A few ships of the line, sent opportunely to the reinforcement of either side, would often be sufficient to decide the fate of a campaign on the event of which interests of the greatest magnitude were suspended. Our position is, in this respect, a most commanding one. And if to this consideration we add that of the usefulness of supplies from this country in the prosecution of military operations in the West Indies, it will readily be perceived that a situation so favorable would enable us to bargain with great advantage for commercial privileges. A price would be set not only upon our friendship, but upon our neutrality. By a steady adherence to the Union, we may hope, ere long, to become the arbiter of Europe in America, and to be able to incline the balance of European competitions in this part of the world as our interest may dictate.

But in the reverse of this eligible situation, we shall discover that the rivalships of the parts would make them checks upon each other, and would frustrate all the tempting advantages which nature has kindly placed within our reach. In a state so insignificant our commerce would be a prey to the wanton intermeddlings of all nations at war with each other; who, having nothing to fear from us, would with little scruple or remorse supply their

wants by depredations on our property as often as it fell in their way. The rights of neutrality will only be respected when they are defended by an adequate power. A nation despicable by its weakness forfeits even the privilege of being neutral.

Under a vigorous national government, the natural strength and resources of the country, directed to a common interest, would baffle all the combinations of European jealousy to restrain our growth. This situation would even take away the motive to such combinations, by inducing an impracticability of success. An active commerce, an extensive navigation, and a flourishing marine would then be the offspring of moral and physical necessity. We might defy the little arts of the little politicians to control or vary the irresistible and unchangeable course of nature.

But in a state of disunion these combinations might exist and might operate with success. It would be in the power of the maritime nations, availing themselves of our universal impotence, to prescribe the conditions of our political existence; and as they have a common interest in being our carriers, and still more in preventing our becoming theirs, they would in all probability combine to embarrass our navigation in such a manner as would in effect destroy it, and confine us to a PASSIVE COMMERCE. We should then be compelled to content ourselves with the first price of our commodities, and to see the profits of our trade snatched from us to enrich our enemies and persecutors. That unequalled spirit of enterprise which signalizes the genius of the American merchants and navigators, and which is in itself an inexhaustible mine of national wealth, would be stifled and lost, and poverty and disgrace would overspread a country which, with wisdom, might make herself the admiration and envy of the world.

There are rights of great moment to the trade of America which are rights of the Union—I allude to the fisheries, to the navigation of the Western lakes, and to that of the Mississippi. The dissolution of the Confederacy would give room for delicate questions concerning the future existence of these rights; which the interest of more powerful partners would hardly fail to solve to our disadvantage. The disposition of Spain with regard to the Mississippi needs no comment. France and Britain are concerned with us in the fisheries, and view them as of the utmost moment to their navigation. They of course would hardly remain long indifferent to that decided mastery of which experience has shown us to be possessed in this valuable branch of traffic, and by which we are able to undersell those nations in their own markets. What more natural than that they should be disposed to exclude from the lists such dangerous competitors?

This branch of trade ought not to be considered as a partial benefit. All

the navigating States may, in different degrees, advantageously participate in it, and under circumstances of a greater extension of mercantile capital would not be unlikely to do it. As a nursery of seamen it now is, or, when time shall have more nearly assimilated the principles of navigation in the several States, will become, a universal resource. To the establishment of a navy it must be indispensable.

To this great national object, a NAVY, union will contribute in various ways. Every institution will grow and flourish in proportion to the quantity and extent of the means concentered toward its formation and support. A navy of the United States, as it would embrace the resources of all, is an object far less remote than a navy of any single State or partial confederacy, which would only embrace the resources of a single part. It happens, indeed, that different portions of confederated America possess each some peculiar advantage for this essential establishment. The more southern States furnish in greater abundance certain kinds of naval stores—tar, pitch, and turpentine. Their wood for the construction of ships is also of a more solid and lasting texture. The difference in the duration of the ships of which the navy might be composed, if chiefly constructed of Southern wood, would be of signal importance, either in the view of naval strength or of national economy. Some of the Southern and of the Middle States yield a greater plenty of iron, and of better quality. Seamen must chiefly be drawn from the Northern hive. The necessity of naval protection to external or maritime commerce does not require a particular elucidation, no more than the conduciveness of that species of commerce to the prosperity of a navy.

An unrestrained intercourse between the States themselves will advance the trade of each by an interchange of their respective productions, not only for the supply of reciprocal wants at home, but for exportation to foreign markets. The veins of commerce in every part will be replenished, and will acquire additional motion and vigor from a free circulation of the commodities of every part. Commercial enterprise will have much greater scope, from the diversity in the productions of different States. When the staple of one fails from a bad harvest or unproductive crop, it can call to its aid the staple of another. The variety, not less than the value, of products for exportation contributes to the activity of foreign commerce. It can be conducted upon much better terms with a large number of materials of a given value than with a smaller number of materials of the same value, arising from the competitions of trade and from the fluctuations of markets. Particular articles may be in great demand at certain periods, and unsalable at others; but if there be a variety of articles, it can scarcely happen that they should all be at one time in the latter predicament, and on this account the operations

of the merchant would be less liable to any considerable obstruction or stagnation. The speculative trader will at once perceive the force of these observations, and will acknowledge that the aggregate balance of the commerce of the United States would bid fair to be much more favorable than that of the thirteen States without union or with partial unions.

It may perhaps be replied to this that, whether the States are united or disunited, there would still be an intimate intercourse between them which would answer the same ends; but this intercourse would be fettered, interrupted, and narrowed by a multiplicity of causes, which in the course of these papers have been amply detailed. A unity of commercial, as well as political, interest can only result from a unity of government.

There are other points of view in which this subject might be placed, of a striking and animating kind. But they would lead us too far into the regions of futurity, and would involve topics not proper for a newspaper discussion. I shall briefly observe that our situation invites and our interests prompt us to aim at an ascendant in the system of American affairs. The world may politically, as well as geographically, be divided into four parts, each having a distinct set of interests. Unhappily for the other three, Europe, by her arms and by her negotiations, by force and by fraud, has, in different degrees, extended her dominion over them all. Africa, Asia, and America have successively felt her domination. The superiority she has long maintained has tempted her to plume herself as the Mistress of the World, and to consider the rest of mankind as created for her benefit. Men admired as profound philosophers have in direct terms attributed to her inhabitants a physical superiority, and have gravely asserted that all animals, and with them the human species, degenerate in America—that even dogs cease to bark after having breathed a while in our atmosphere. Facts have too long supported these arrogant pretensions of the Europeans. It belongs to us to vindicate the honor of the human race, and to teach that assuming brother moderation. Union will enable us to do it. Disunion will add another victim to his triumphs. Let Americans disdain to be the instruments of European greatness! Let the thirteen States, bound together in a strict and indissoluble Union, concur in erecting one great American system, superior to the control of all transatlantic force or influence, and able to dictate the terms of the connection between the old and the new world!

THE GENERAL ORDER OF THE NATIONS¹

Walter Lippmann

THE NUCLEAR ALLIANCE

THE present association of the United States with Britain, Russia, and China is not a new departure. We have seen how for more than a century, whenever our vital interests were at stake, American foreign relations have always been primarily our relations with Britain, with Russia, and with China. Our relations with all other states have followed upon and have been governed by our relations with those three. In the conduct of American foreign policy our position has been solvent, our power adequate to our commitments, in so far as we were in essential agreement with these three states.

None of them, we may observe, is a European state. We must ponder this fact. For it may throw light upon the famous statement in Washington's Farewell Address that:—

Europe has a set of primary interests which to us have none or a very remote relation. Hence she must be engaged in frequent controversies, the causes of which are essentially foreign to our concerns.

When these words were spoken on September 17, 1796, Napoleon was conducting his first campaign of aggression, the invasion of Italy. His conquest of the continent was still in the future, as was his threat to invade England and his actual invasion of Russia. The war which Washington knew about had all the appearance of being a purely *European* war, which to us had none or a very remote relation. Sixteen years later, however, Napoleon was the master of Europe, and had struck outside of Europe into Russia. The United States had become involved in a local war with England. Yet while America was at war, we find Jefferson, the author of the phrase, "no entangling Alliances," writing on January 1, 1814, that "surely none of us wish to see Bonaparte conquer Russia, and lay thus at his feet the whole continent of Europe. This done, England would be but a breakfast . . . Put all Europe into his hands, and he might spare such a force, to be sent in British ships, as I would as leave not have to encounter." Jefferson was writing a private letter in wartime² and he added:

I have gone into this explanation, my friend, because I know you will not carry my letter to the newspapers, and because I am willing to trust to your discretion

¹Reprinted from *U. S. Foreign Policy* by Walter Lippmann (1943). Little Brown and Company and Atlantic Monthly Press.

²To Thomas Leiper, 14 Jefferson 41, 43.

the explaining me to our honest fellow laborers and the bringing them to pause and reflect . . . on the extent of the success we ought to wish to Bonaparte, and with a view to our own interests only.

We see here how the very men who laid down the rule of nonparticipation in European politics really thought about our foreign relations. They were aware that when there was a power in Europe which threatened to *come out of Europe* and conquer Britain, which is at one of the limits of Europe, or to conquer Russia which is at the other limit, our interests were vitally involved. If we read our history, not as the conventional historians have written it, and not as our lesser statesmen have talked about it, but as in fact Americans enacted it, we find, I submit, that while our concern has not been with *European* affairs, we have always been concerned with *world* affairs. Our primary relations have been, and are, with the extra-European powers, and with Europe itself only as some power inside of Europe threatens to disrupt the order of things outside of Europe. Thus, if we think as clearly and exactly about American interests as Jefferson, even in the midst of a jingoistic war, was able to think, we shall see that the traditional American policy against being involved in European affairs is not in the last analysis inconsistent with the consolidation of America's vital interest in the world.

Our primary interest in Europe, as shown during the Napoleonic and the two German Wars, is that no European power should emerge which is capable of aggression outside of the European continent. Therefore our two natural and permanent allies have been and are Britain and Russia. For they have the same fundamental interest—to each of them a matter of national life or death—in preventing the rise of such a conquering power in Europe. And that is why Britain and Russia, though they have been at odds on the Near East, the Middle East, and in Asia, have been allies against Napoleon, against William II, and against Hitler.

Here then, founded on vital interest which has been tested and proved in the course of generations, is the nuclear alliance upon which depends the maintenance of the world order in which America lives. Combined action by America, Britain, and Russia is the irreducible minimum guarantee of the security of each of them, and the only condition under which it is possible even to begin to establish any wider order of security.

The formation of this nuclear alliance must in our thinking and in our action take precedence over all other considerations. For without it we cannot make good our existing commitments in the Atlantic and in the Pacific. Without it, our commitment in the Philippines remains a salient, exceedingly difficult to defend against a resurgent Japan or against a combination of

powers in Eastern Asia. Without this nuclear alliance, our commitment in South America is open to challenge, if not by direct conquest from Europe and Africa, then by infiltration and conspiracy. Without it, the two oceans and the airways to the north and the south are perilously open and uncertain, since the ports and landing fields beyond would be in uncertain hands.

Only by the formation of this nuclear alliance—whatever we choose to call it, no matter how we choose to seal it—can American foreign policy be said to have balanced our commitments with a safe margin in reserve. We need make no apologies then because we put this first thing first. American foreign relations must be made solvent before the United States can afford to issue any more promissory notes.

Furthermore, we should not have learned the lessons of our failures in the past, especially the lesson of the failure of the League of Nations, if in our projects for organizing world peace we did not fix our attention first of all upon the powers capable of organizing it. Blueprints, covenants, contracts, charters, and declarations do not create living associations. They merely formulate, regulate, ratify, develop, and guide the action of men or groups of men who already have the will to associate themselves. It is not, for example, the marriage laws which make the family, but the union of a man and a woman who in accordance with these laws then found a family. It was not the Constitution which made the American union, but the constituent states which adopted it in order to form a more perfect union.

The will of the most powerful states to remain allied is the only possible creator of a general international order.

THE JUSTIFICATION OF INSISTING UPON IT

There will be many, I realize full well, who will feel that this insistence upon the security of the vital interests of the most powerful states involves an illiberal and even a brutal neglect of the rights of the weaker nations and of their intrinsic importance to civilization itself. I ask their indulgence until the argument is concluded. We shall see why the nuclear alliance must be liberal in its policy if it is to endure.

But if we are to prove this convincingly, and not merely to state it rhetorically, there must be no doubt in our minds why as Americans we must insist upon beginning with the security of the vital interests of the United States. It is that for half a century the United States has so neglected its vital interests that it was incapable of defending them adequately, or of carrying through any measures whatsoever to maintain the peace of the world. For fifty years no nation has been more liberal in its words than has

been the United States; none neglected its own interests so dangerously, or contributed less to realizing the ideals it so assiduously preached.

So I make no apology for seeking to define the American foreign policy on which the American people could again become united because it conforms rigorously to American interests. I see no way of our being able to contribute anything to anybody else until we have become fully conscious again of our own interests and feel prepared to maintain them. . . . And I do not doubt that our allies and our friendly neighbors will, as they consider the matter, greatly prefer an American foreign policy founded on an enlightened conception of our own national interest to the ambiguous platitudes with which we have regaled them for the past fifty years.

Nor need we shrink from insisting that the precondition of a better world order is a nuclear alliance of the three powerful military states which will emerge victorious from the present war. They are the states upon which depends the deliverance of Europe from the Nazi despotism, and of the Far East from the empire of Japan. It has needed the combined force of all three of these states, and the utmost exertion of their power, to make the deliverance possible. No one of them, no two of them, could have done it. Why, then, should we hesitate to say that anything less than this combination of great powers is insufficient to preserve order against aggression in the world? Will anyone presume to argue that to dissolve this combination again would promote the liberty of the peoples who have been conquered, or would make secure the order which has been shattered by two devastating world wars?

It is only around this strong nuclear alliance that a wider association of many nations can constitute itself. If that condition is accepted, and once it is accepted, it will become evident that the combination of the great powers cannot, despite their common vital interests, be made to hold together except as they respect the liberties of the other peoples and promote them by the maintenance of law.

I believe it can be demonstrated as conclusively as anything can be demonstrated in human affairs that Britain, Russia, America, and China as she becomes a great state, cannot remain allies and partners unless they use their power, separately and in combination, to maintain liberty through law.

THE BINDING CONDITION OF UNITY

We must begin by remembering that Britain, Russia, and America are allies, not by conscious choice but under the compulsion of their common enemies. They have been compelled, as I have tried to show, to become allies whenever a really formidable aggressive power emerged which threatened to

break out of Europe into the outer world. Nevertheless, when there is no such enemy which threatens their national existence, the need for their alliance becomes submerged. Their lesser, their separate and conflicting, interests are then free to assert themselves. The greater the peril from the outside, the closer is their union: the greater their security, the more their differences come to the surface.

The unconditional surrender of Germany and of Japan is bound, therefore, to leave all the Allies with an immediate sense of mortal peril averted; and this will reduce the compulsion that binds the alliance together. There will then be opened up disputable secondary questions which push apart the members of the alliance. This has always happened in wars won by a coalition. It happened at the Congress of Vienna, and because of it Talleyrand's diplomacy was so successful. It happened at the Peace Conference in 1919, when the victorious alliance had in fact become dissolved even before peace had been made with the enemy. It can and it may happen again, as we have seen in the winter of 1943, when the first prospects of victory have already opened up fissures among the Allies.

These fissures will tend to become wider and deeper the more any one of the great powers seeks to aggrandize itself either at the expense of one of the other great powers, or at the expense of their smaller allies.

Thus an American policy of imperialist aggrandizement at the expense of the British Empire would impair profoundly, if it did not destroy, the Atlantic Community. It would become necessary for Britain to look for her security in some combination which thwarted American aggrandizement.

By the same token, a British policy which rested on the refusal to recognize the necessary changes in the colonial and imperial system of the nineteenth century would raise up against Britain insurgent forces in Asia, the Middle East, and Africa. Britain could not count upon American support in resisting these forces, and almost certainly she would have to count upon Russian and Chinese encouragement of these forces.

By the same token again, a Russian policy of aggrandizement in Europe, one which threatened the national liberties of her neighbors, would inexorably be regarded as such a threat to Britain and America that they would begin to encourage the nations which resisted Russia. In Asia, a Russian policy of aggrandizement against China would disrupt Russian-American relations in the North Pacific and, in the coming air age, across the top of the globe. On the other hand, an anti-Russian policy in which Britain, America, and the European states sought, as they did in 1919, to blockade and even to disrupt Russia would provoke Russian communist intervention to counteract it.

And by the same token, also, a Chinese policy of aggrandizement in India, Malaya, Indo-China, and the Netherlands Indies would encounter opposition from Britain, from America, from Australia and New Zealand, from France and the Netherlands.

The fissures opened by any one or all of these tendencies to aggrandizement would soon become a breach. This would be followed inevitably and immediately by competition among the Allies to win over to their side the vanquished nations. This would be done by restoring their power. In Europe the separated Allies would bid against one another for the favor of Germany. In Asia, they would bid for the favor of Japan. Thus because aggrandizement had made them rivals, they would restore the aggressor powers which had threatened them. The postwar era would thus be transformed, as the late Frank Simonds observed of the early thirties, into a pre-war era.

For these reasons it is evident that a nuclear alliance of Britain, Russia, America, and if possible, China, cannot hold together if it does not operate within the limitations of an international order that preserves the national liberties of other peoples. The three, or the four, great powers will not remain united against the revival of German and Japanese military power if they become rivals in the domination of Central and Eastern Europe or of the dependent and colonial regions of Asia and Africa.

Nor could the nuclear allies, as some may fear, combine to oppress and exploit the rest of mankind. For, in the last analysis, the resistance of the rest of mankind would disrupt the alliance: one or the other of the great powers would find that its interests and its sympathies lay with the peoples resisting oppression.

Nor could the nuclear allies divide the globe into spheres of influence which each was free to dominate and exploit separately. For no spheres of influence can be defined which do not overlap, which would not therefore bring the great powers into conflict. Where in Europe, for example, could a sphere of influence be fixed which separated Britain and Russia into convenient imperialist compartments? On which side of the line would the Scandinavian countries lie? If on the Russian, then the sea and air approaches to Britain are insecure; if on the British, then the sea and air approaches to Russia are insecure. Where in Africa could a line of demarcation be drawn when, in fact, the defense of South America is dependent upon the presence of friendly powers in North and West Africa, when in fact the security of the Mediterranean is also dependent upon the control of North and West Africa? Where can a sphere of influence be defined in the East which makes secure China, the British nations in Australia, and the American commitment in the Philippines?

Thus it is as impossible for the Allied great powers to divide up the world and then rule it as it is for them to combine in order to dominate the world. The inexorable logic of their alliance demands that they recognize the liberties of the peoples outside the alliance. For in no other way can they avoid becoming rivals and then enemies for the domination of these other peoples. In no other way but by supporting a world-wide system of liberty under law can they win the consent, earn the confidence, and insure the support of the rest of the world in the continuation of their alliance.

The order which they originate because it is necessary to their own vital security can, therefore, be perpetuated only if they act so as to gain and to hold the good will of the other peoples. Delivering the weaker states from the Nazi and Japanese conquest will not in itself hold their good will. For the memory of the deliverance will become obscured by what happens afterwards. Their own concept of their own interest, rather than gratitude, is for all masses of peoples the motive which determines their actions. The gratitude of the liberated to the victorious powers will, therefore, continue only if the great powers remain united enough to keep the peace of the world against aggressors and at the same time become liberal enough so that there is no good reason for rebellion against the order which they maintain.

The experience of history supports the conclusion that power can endure only if it gives and maintains laws within which men enjoy the liberties they regard as more important than life. Not all peoples everywhere and always have had the same conception of their essential liberties. But whatever they regard as their essential liberties, be they the liberties of the Christian West or of the Moslem world, or of the Hindus, or of the Chinese, it is these liberties which must be respected under the law if the power behind the law is to endure. Though the world is shrunken, we must not imagine that any system of identical laws can prevail everywhere. The East and the West have been formed in widely different cultural traditions. But what can prevail everywhere, if the alliance holds together, is the universal law that force must not be arbitrary, but must be exercised in accordance with laws that are open to discussion and are subject to orderly revision.

An order of this kind can endure, not forever in a changing world, but for a long and beneficent period of time. Security and liberty are the benefits which such an order can provide. They are such great benefits that whenever men have enjoyed them at all they have rallied to the authority which provided them. It was because the Roman legions brought with them the Roman law that the Roman Empire lived on so long, and when it fell, lived on in men's memories for a thousand years as an ideal to which they longed to return. It has been Britain's devotion to law which, despite all the rebellion

against British rule, has brought so many nations to Britain's side whenever Britain has been really threatened. And I think Americans may without false pride believe that in the last analysis it is our own preference for liberty under law, and not our material power only, which has made the neighbor republics of this hemisphere believe that their vital interests and ours are the same.

CONCLUSION AS TO THE ORGANIZATION OF A NEW ORDER

For these reasons it is self-evident that in a fully enlightened view of the vital interests of the great powers and of the smaller we may conclude that:—

To establish and maintain order the nuclear alliance must be consolidated and perpetuated.

To perpetuate their alliance the great powers must become the organizers of an order in which the other peoples find that their liberties are recognized by laws that the great powers respect and that all peoples are compelled to observe.

If this is done, the new order will rest not on sentiment but on enlightened interest. Then only will it be strong enough to have authority. Then only will it be liberal enough to have its authority persist.

FINALE

The structure of the order which the nuclear allies could or should institute, the laws and covenants they could or should subscribe to, the procedures they could or should agree upon—these matters lie outside the province of this inquiry. We have been concerned with finding the American foreign policy which will most adequately and surely make this republic solvent in its foreign relations. We have, therefore, dwelt upon those measures which are indispensable to America if it is to fulfill the commitments it has, or if it is to be able to make commitments at all. We have found, I believe, that the measures which will most securely maintain the vital interests of the United States are measures which will no less securely maintain the vital interests of our neighbors, the great ones and the smaller ones alike.

Guided by this principle, and determined to apply it, we shall be capable again of forming an American foreign policy. We shall no longer be, as we have been for nearly fifty years, without a foreign policy which takes account

of our interests. We need no longer be divided because the national interest upon which we must unite will have been made evident to us. We shall no longer exhort mankind to build castles in the air while we build our own defenses on sand.

Then, when we know what we ourselves need and how we must achieve it, we shall be not only a great power. We shall have become at last a mature power. We shall know our interests and what they require of us. We shall know our limitations and our place in the scheme of things.

A JOB TO BE DONE¹

Vera Micheles Dean

IN THE turbulent years ahead, many of us may ponder the last words of Socrates when, after his condemnation to death by the judges of Athens, he said: "The hour of departure has arrived, and we go our ways—I to die, and you to live. Which is better God only knows."

Terrible as the sufferings inflicted by war on millions of men, women and children have been, the problems of those who live to take part in the tasks of post-war reconstruction will be an even greater test of courage, vision, and the capacity to work together for the common good. The ashes of Stalingrad and Warsaw, of Rotterdam and Cologne, of Cassino and Manila have not yet been cleared away; yet already new animosities and fresh distrust loom among nations who were expected to continue into the days of peace the cooperation they had achieved in time of war. As British Foreign Secretary Eden said at San Francisco, there is a job of work to be done in achieving peace.

SECURITY: OUR PRIMARY TASK

What is the primary task that awaits us as we clear up the débris of war? The primary task of the United Nations is to answer the question that is haunting men and women everywhere—the question of how to achieve security now that hostilities are over. This is a twofold task. People want to have security at home, against the specter of unemployment that stalked all lands during the inter-war years; and security abroad, against the renewal

¹Reprinted from *The Four Cornerstones of Peace*, by Vera Micheles Dean (1946). McGraw-Hill Book Co., Inc.

of armed aggression. These two aspects of security are inextricably linked! We know now that we shall be unable to enjoy peace and prosperity within our borders if the rest of the world is torn by war and civil strife, and overshadowed by hunger, misery, and disease. Sooner or later the repercussions of events abroad would be felt here, as they have in two world wars. It is therefore not for reasons of sentiment alone, or idealism alone, but for reasons of self-interest that the United States is concerned with plans for post-war security.

THE LONE-HAND WAY

How shall we go about achieving security? The old time-tested way, which has been used again and again throughout history, is for every nation to try to assure its own security by its own unaided efforts, regardless of what happens to the rest of the world. This way is open today only to the great powers. The small nations have neither the territory, the manpower, nor the industrial and financial resources to defend themselves against attack by strong, aggressive neighbors. But let us assume that the United States, Britain, and Russia could achieve security by their own national efforts. This, you might say, would be worth trying if the great powers at least can gain security for five, or ten, or twenty years. What must they do to achieve security by this method?

Great powers who are determined to rely on their own national efforts for security usually try to do two things. First, they try to create zones of security around their territories by taking over or dominating adjoining areas. For example, when Russia claims eastern Poland, the Baltic states, and bases in Finland, she claims them not chiefly on historic grounds, although she could do so since these territories were part of the Russian Empire for varying periods of time before 1917. She claims these areas on grounds of security, to cushion the shock of future German aggression. As long as we live in a world of international anarchy, every nation is like a man on a trapeze—afraid to let go of the foothold of national security until it is sure of international security. Russia's claims are understandable claims.

THE STRUGGLE FOR SAFETY ZONES

The danger, however, is that every great power can make similar claims. Although the British have not yet done so officially, they could reasonably say that they need the Italian colonies in Africa conquered by British troops during this war; also bases in the Low Countries to protect their Channel ports; and in Italy and Greece to protect their lifeline through the Mediter-

anean. Then, too, Americans can say—and some have said already—that the United States should take over as many islands in the Pacific as possible to guard us against any future attack by Japan. Other Americans go further and say that we should actually take over the possessions of our allies—Britain, Holland, and France—in the Western Hemisphere, so as to make this country impregnable to attack also in the Atlantic Ocean. Thus if each great power demands territories it believes it needs for national security, a dangerous race will have started for re-division of the world's goods. Such a race would have only one predictable outcome: another world war, this time among the victors in the war for the spoils of victory.

But, you might say, this would not be so dangerous as it seems, because every great power would maintain armed forces sufficient to ward off attack from any quarter. There is no doubt that in future years Britain and the Dominions, the United States, and Russia could attempt to maintain armed forces more or less equivalent to those they have raised in time of war. Nor does any responsible person today urge the disarmament of the United Nations. The only disarmament that is being discussed is that of Germany and Japan. But the question with which we are faced is whether every great power will remain armed to the teeth after the war, ready to take on all comers, and ready too to pay the high cost of such armaments; or whether each will gradually reduce its armaments, thus reducing also the economic burdens borne by its people. Should nations decide to follow the second course, they could then pool their reduced armaments in a common force placed at the disposal of an international organization.

Let us assume, however, that every great power decides to maintain its own armed forces on a basis comparable to that of wartime. What would this mean for its people? If we are to maintain in time of peace armed forces comparable to our wartime forces, which cost us millions of dollars every day, we shall have to bid farewell to social progress. And sooner or later we shall discover that we have accepted the very philosophy of life we are fighting—the philosophy that forces the individual to become an instrument, a slave of a totalitarian state whose sole aim is military preparedness.

Grim as this prospect may seem, some people might say it is worth considering if the great powers can thus hope to achieve security. But is mere possession of additional territory and vast armaments in itself a safeguard of national security? If they are, then why did Germany and Japan prove insecure? Germany achieved maximum expansion on the European continent, including European Russia, and built up the mightiest land forces of modern times. Yet the Germans found themselves driven out of the countries they conquered, faced with the necessity of defending themselves on their

own soil. This was a contingency so feared by the German Army in 1918 that, rather than permit the Allies to invade Germany, Ludendorff at that time insisted on seeking an armistice. Japan too seemed for a time to have conquered a vast empire in Asia, rich with many of the raw materials it coveted for the development of its industrial and military machine. Yet the conquest of large sections of China, the occupation of the Dutch East Indies and the Philippines, the control of Burma and Malaya, and the possession of land, naval, and air forces did not make the Japanese safe in their home islands. With the development of long-range bombing; with the perfecting of such ruthless instruments of war as the atomic bomb; with the proof, so brilliantly given by Americans, that the armies of one nation can cross oceans to invade the shores of other nations, it is doubtful that any country will in the future be long invulnerable to attack.

THE WAY OF COLLECTIVE ACTION

It is because there is so little hope that any country, no matter how powerful, will be able to achieve security by its own unaided efforts that people everywhere have sought an alternative method. What is the alternative? It can best be described by that much derided phrase—collective security. This phrase had come into disrepute because many people mistakenly assumed that the League of Nations was a system of collective security. Since the League had failed to prevent World War II, they jumped to the conclusion that collective security had proved a failure.

Yet most of us realize today that the League of Nations was not a system of collective security. It was an agglomeration of nations, each of which was so jealous of its sovereign rights that it refused to make any major adjustments for the sake of the international community as a whole. If all that we can produce at the end of this war is a replica of the League, then it might perhaps be better not to establish such an organization. It would be better not to create the illusion again that merely by signing some documents we have assured peace on earth, thus lulling people into a false sense of security. It would be more merciful to let every nation rely, as in the past, on its own military power for such precarious safety as it might attain in a world in which, to quote Hobbes' famous phrase, human life would be "nasty, brutish and short."

WHAT MAKES INTERNATIONAL ORGANIZATION EFFECTIVE?

If we are to build on stronger foundations this time, what should an international organization have in order to be effective? Such an organization should be able to do at least two things. First, there should be continuous consultation among nations about any friction or dispute which might lead to war, if not alleviated or settled. Infrequent conferences held in the full spotlight of world publicity do not fill the need for day-to-day consideration of problems likely to provoke conflict—the kind of consideration that we give to local problems in city and village councils and to the problems of the nation in Congress and the Executive Departments. The League of Nations made only partial provision for such consultation. Second, to be effective, an international organization should have military force at its disposal, to be used whenever a nation resorts to aggression after its legitimate grievances have been given due consideration and a genuine attempt has been made to meet them. The League of Nations had no such force at its disposal.

There are many sincere and high-minded people who believe that the use of force should be eliminated in human relations. Yet those who object to the use of force among nations do not usually demand the removal of the police from our villages, towns, and states. Of course, the police in this country and in other civilized countries are themselves under the control of a government—municipal, state, or national—and can be checked by the courts. Thus the police for the most part are not apt to make arbitrary and violent use of force, as nations have done again and again in their relations with each other. However, the answer to this point is not that we should eliminate the use of force in relations between nations, but that we should place such force under the control of an international government and subject it to check by an international court.

Many people deplore the necessity of using force in international relations and are skeptical about political adjustments of international problems. They wonder whether it might not be possible to settle all conflicts among nations through an international court. Such a court, as stated in the San Francisco Charter and previously in the League of Nations Covenant, is an essential feature of any international organization. But a court alone could not possibly be expected to settle all conflicts among nations. In our nation we do not rely solely on the courts to adjust relations among our citizens. In addition to courts we have the political machinery of the Executive and Congress and the enforcement machinery of our police.

Also, most of the conflicts among nations that are likely to lead to war are not what we call "justiciable" conflicts. That is, they often concern matters on which there are as yet no accepted rules of international law and which therefore cannot be settled by a court administering law. What an international court can do is to decide questions involving the interpretation of treaties; that is one of the principal sources of what we call international law. However, treaties and other legal documents cover only a few of the problems that lead to conflicts among nations. For example, the hostility of some Germans toward Poland was a very real factor in unleashing World War II, but it was an intangible matter that could not be embodied in a lawyer's brief or passed on by a court. Or take Mussolini's claim that Italy was a poor country which should increase its resources by armed expansion; that was an important reason for Italy's invasion of Ethiopia, but it was not a question a court could have decided.

Most of the reasons for which nations go to war are political, economic, social, or psychological in character, or a mixture of all these. They must be dealt with by international institutions equipped to settle political, economic, and social questions, staffed preferably by men and women who have some knowledge and understanding of the psychology and emotions of the various peoples involved. When disputes of this kind fail to be settled by peaceful means, and an act of aggression occurs, an international court would not be prepared to meet such an emergency. Then force will have to be used by the international organization as a last resort.

NO MILLENNIUM IN STORE

Even if we do succeed in establishing an effective international organization, we must not expect it to bring about the millennium. Many people believe that the moment an international organization has been set up it will assure "order" throughout the world. But as long as there is life on earth there will be disorder, there will be constant changes in the relations of human beings with each other. Our task is not to prevent all conflicts among nations (that is impossible), but to make sure that when conflicts do arise they are settled by peaceful means, not by war. Again, some people think that an international organization will be no good unless it can find "solutions" for all problems that may arise between nations. No one familiar with the ways of mankind can possibly believe that there are finite "solutions" for any problem. The best we can do is to reach workable compromises, knowing full well that any compromise made today will have to be revised tomorrow. Human institutions grow very slowly. Just remember how long it took

for democratic institutions to develop from Magna Carta to the present day. Viewed in the perspective of history, our experience with international organization is very brief.

At this point pessimists are apt to say, "What's the use of even discussing an international organization? There have always been wars, and there always will be wars. So let's just accept this unpleasant situation as gracefully as possible." Such an attitude is not only defeatist, but it also falsifies the historical experience of mankind. Let us look back for a moment to the feudal period in Europe, to our own frontier days in this country. In those times the individual felt that he had a sacred right of self-defense; and, to defend himself and his family against all comers, he carried a lance, sword, pistol, or shotgun. Then, gradually, so gradually that it is impossible to fix definite dates, the individual began to wonder whether he might not achieve greater security by entrusting his protection and that of his family to the community; whether he might gain more than he would lose by foregoing his sacred right of self-defense. And he began to leave his lance, sword, pistol, or shotgun at the door of the courthouse and the council chamber. Thus individuals gave up what they had once regarded as their right, and instead worked together to establish peaceful national communities in which conflicts are settled not by duels or private feuds, but by legislation, by the decisions of the courts, by the use of police force against the few who in any community on occasion defy the law.

Today nations are at the stage where individuals were in feudal times and in the days of our frontier. Optimists had assumed that in international affairs we had reached the twentieth century because we had learned to use so many of this century's technical gadgets. Pessimists would say that internationally we are still in the jungle age. But let us be moderately cheerful and say that nations today are facing the decisions that confronted individuals in olden days. Nations must decide whether they will gain more than they will lose by entrusting their protection, in part at least, to an international organization. Will they leave their guns and bombs outside the doors of courthouses and council chambers? This is a difficult decision to make, and it may not be fully reached in our lifetime. But it will be made some time in human history. Every small thing we can do now to advance this decision is a great step forward, even though it may seem insignificant to us who are so close to the affairs of our times that we cannot see this century in true perspective.

THE REAL PROBLEM IS IN THE HEARTS OF MEN

Albert Einstein

[Reprinted from the *New York Times Magazine*, June 23, 1946]

MANY persons have inquired concerning a recent message of mine that "a new type of thinking is essential if mankind is to survive and move to higher levels."

Often in evolutionary processes a species must adapt to new conditions in order to survive. Today the atomic bomb has altered profoundly the nature of the world as we knew it, and the human race consequently finds itself in a new habitat to which it must adapt its thinking.

In the light of new knowledge, a world authority and an eventual world state are not just *desirable* in the name of brotherhood, they are *necessary* for survival. In previous ages a nation's life and culture could be protected to some extent by the growth of armies in national competition. Today we must abandon competition and secure cooperation. This must be the central fact in all our considerations of international affairs; otherwise we face certain disaster. Past thinking and methods did not prevent world wars. Future thinking *must* prevent wars.

Modern war, the bomb, and other discoveries or inventions present us with revolutionary circumstances. Never before was it possible for one nation to make war on another without sending armies across borders. Now with rockets and atomic bombs no center of population on the earth's surface is secure from surprise destruction in a single attack.

America has a temporary superiority in armament, but it is certain that we have no lasting secret. What nature tells one group of men, she will tell in time to any other group interested and patient enough in asking the questions. But our temporary superiority gives this nation the tremendous responsibility of leading mankind's effort to surmount the crisis.

Being an ingenious people, Americans find it hard to believe there is no foreseeable defense against atomic bombs. But this is a basic fact. Scientists do not even know of any field which promises us any hope of adequate defense. The military-minded cling to old methods of thinking and one Army department has been surveying possibilities of going underground, and in wartime placing factories in places like Mammoth Cave. Others speak of dispersing our population centers into "linear" or "ribbon" cities.

Reasonable men with these new facts to consider refuse to contemplate a future in which our culture would attempt to survive in ribbons or in under-

ground tombs. Neither is there reassurance in proposals to keep a hundred thousand men alert along the coasts scanning the sky with radar. There is no radar defense against the V-2, and should a "defense" be developed after years of research, it is not humanly possible for any defense to be perfect. Should one rocket with atomic warhead strike Minneapolis, that city would look almost exactly like Nagasaki. Rifle bullets kill men, but atomic bombs kill cities. A tank is a defense against a bullet but there is no defense in science against the weapon which can destroy civilization.

Our defense is not in armaments, nor in science, nor in going underground. Our defense is in law and order.

Henceforth, every nation's foreign policy must be judged at every point by one consideration: does it lead us to a world of law and order or does it lead us back toward anarchy and death? I do not believe that we can prepare for war and at the same time prepare for a world community. When humanity holds in its hand the weapon with which it can commit suicide, I believe that to put more power into the gun is to increase the probability of disaster.

Remembering that our main consideration is to avoid this disaster, let us briefly consider international relations in the world today, and start with America. The war which began with Germany using weapons of unprecedented frightfulness against women and children ended with the United States using a supreme weapon killing thousands at one blow.

Many persons in other countries now look on America with great suspicion, not only for the bomb but because they fear she will become imperialistic. Before the recent turn in our policy I was sometimes not quite free from such fears myself.

Others might not fear Americans if they knew us as we know one another, honest and sober and neighbors. But in other countries they know that a sober nation can become drunk with victory. If Germany had not won a victory in 1870, what tragedy for the human race might have been averted!

We are now making bombs and the bombs are making hate and suspicion. We are keeping secrets and secrets breed distrust. I do not say we should now turn the secret of the bomb loose in the world, but are we ardently seeking a world in which there will be no need for bombs or secrets, a world in which science and men will be free?

While we distrust Russia's secrecy and she distrusts ours we walk together to certain doom.

The basic principles of the Acheson-Lilienthal Report are scientifically sound and technically ingenious, but as Mr. Baruch wisely said, it is a prob-

lem not of physics but of ethics. There has been too much emphasis on legalisms and procedure; it is easier to denature plutonium than it is to denature the evil spirit of man.

The United Nations is the only instrument we have to work with in our struggle to achieve something better. But we have used U. N. and U. N. form and procedure to outvote the Russians on some occasions when the Russians were right. Yes, I do not think it is possible for any nation to be right all the time or wrong all the time. In all negotiations, whether over Spain, Argentina, Palestine, food or atomic energy, so long as we rely on procedure and keep the threat of military power, we are attempting to use old methods in a world which is changed forever.

No one gainsays that the United Nations Organization at times gives great evidence of eventually justifying the desperate hope that millions have in it. But time is not given to us in solving the problems science and war have brought. Powerful forces in the political world are moving swiftly toward crisis. When we look back to the end of the war it does not seem ten months—it seems ten years ago! Many leaders express well the need for world authority and an eventual world government, but actual planning and action to this end have been appallingly slow.

Private organizations anticipate the future, but government agencies seem to live in the past. In working away from nationalism toward a supra-nationalism, for example, it is obvious that the national spirit will survive longer in armies than anywhere else. This might be tempered in the United Nations military forces by mixing the various units together, but certainly not by keeping a Russian unit intact side by side with an intact American unit, with the usual inter-unit competition added to the national spirit of the soldiers in this world enforcement army. But if the military staffs of the U. N. are working out concrete proposals along these lines, for a true internationally minded force, I have yet to read of it.

Similarly, we are plagued in the present world councils over the question of representation. It does not seem fair to some, for example, that each small Latin-American nation should have a vote while much larger nations are also limited to one vote. On the other hand, representation on a population basis may seem unfair to the highly developed states, because surely great masses of ignorant, backward peoples should not carry as much voice in the complicated technology of our world as those with greater experience.

Fremont Rider in an excellent book, "The Great Dilemma of World Organizations," discusses the idea of representation on the basis of education and literacy—number of teachers, physicians, and so on. Backward nations

looking forward to greater power in the councils of men would be told, "To get more votes you must *earn* them."

These and a hundred other questions concerning the desirable evolution of the world seem to be getting very little attention. Meanwhile, men high in government propose defense or war measures which would not only compel us to live in a universal atmosphere of fear but would cost untold billions of dollars and ultimately destroy our American free way of life—even before a war.

To retain even a temporary total security in an age of total war, government will have to secure total control. Restrictive measures will be required by the necessities of the situation, not through the conspiracy of wilful men. Starting with the fantastic guardianship now imposed on innocent physics professors, outmoded thinkers will insidiously change men's lives more completely than did Hitler, for the forces behind them will be more compelling.

Before the raid on Hiroshima, leading physicists urged the War Department not to use the bomb against defenseless women and children. The war could have been won without it. The decision was made in consideration of possible future loss of American lives—and now we have to consider possible loss in future atomic bombings of *millions of lives*. The American decision may have been a fatal error, for men accustom themselves to thinking a weapon which was used once can be used again.

Had we shown other nations the test explosion at Alamogordo, New Mexico, we could have used it as an education for new ideas. It would have been an impressive and favorable moment to make considered proposals for world order to end war. Our renunciation of this weapon as too terrible to use would have carried great weight in negotiations and made convincing our sincerity in asking other nations for a binding partnership to develop these newly unleashed powers for good.

The old type of thinking can raise a thousand objections of "realism" against this simplicity. But such thought ignores the *psychological realities*. All men fear atomic war. All men hope for benefits from these new powers. Between the realities of man's true desires and the realities of man's danger, what are the obsolete "realities" of protocol and military protection?

During the war many persons fell out of the habit of doing their own thinking, for many had to do simply what they were told to do. Today lack of interest would be a great error, for there is much the average man can do about this danger.

This nation held a great debate concerning the menace of the Axis, and again today we need a great chain reaction of awareness and communication.

Current proposals should be discussed in the light of the basic facts, in every newspaper, in schools, churches, in town meetings, in private conversations, and neighbor to neighbor. Merely reading about the bomb promotes knowledge in the mind, but only talk between men promotes feeling in the heart.

Not even scientists completely understand atomic energy, for each man's knowledge is incomplete. Few men have ever seen the bomb. But all men if told a few facts can understand that this bomb and the danger of war is a very real thing, and not something far away. It directly concerns every person in the civilized world. We cannot leave it to generals, Senators, and diplomats to work out a solution over a period of generations. Perhaps five years from now several nations will have made bombs and it will be too late to avoid disaster.

Ignoring the realities of faith, good-will and honesty in seeking a solution, we place too much faith in legalisms, treaties, and mechanisms. We must begin through the U. N. Atomic Energy Commission to work for binding agreement, but America's decision will not be made over a table in the United Nations. Our representatives in New York, in Paris, or in Moscow depend ultimately on decisions made in the village square.

To the village square we must carry the facts of atomic energy. From there must come America's voice.

This belief of physicists promoted our formation of the Emergency Committee of Atomic Scientists, with headquarters at Princeton, N. J., to make possible a great national campaign for education on these issues, through the National Committee on Atomic Information. Detailed planning for world security will be easier when negotiators are assured of public understanding of our dilemmas.

Then our American proposals will be not merely documents about machinery, the dull, dry statements of a government to other governments, but the embodiment of a message to humanity from a nation of human beings.

Science has brought forth this danger, but the real problem is in the minds and hearts of men. We will not change the hearts of other men by mechanisms, but by changing *our* hearts and speaking bravely.

We must be generous in giving to the world the knowledge we have of the forces of nature, after establishing safeguards against abuse.

We must be not merely willing but actively eager to submit ourselves to binding authority necessary for world security.

We must realize we cannot simultaneously plan for war and peace.

When we are clear in heart and mind—only then shall we find courage to surmount the fear which haunts the world.

Research Papers

THE LIFE OF MEDIEVAL STUDENTS • CHARLES H. HASKINS

THE STORY OF THE CHRISTMAS SEAL • CAROLYN BURWELL

THE LIFE OF MEDIEVAL STUDENTS AS ILLUSTRATED BY THEIR LETTERS¹

Charles H. Haskins

THE early history of universities is one of the most interesting and fruitful of the many questions of origins with which historical science has in recent years been occupied. Through the efforts of Denifle and of others such as Kaufman, Fournier and Rashdall, the subject of medieval universities has been lifted out of the realm of myth and tradition and placed upon a solid basis of established fact, so that, while many perplexing problems still remain unsolved, we can now trace with measurable confidence the main outlines of their early development. As yet, investigation has centered chiefly about what may be called the anatomy of the medieval university—its privileges and organization, its relations to king and pope, and similar questions—while much less attention has been given to its inner life and history or to the daily life and occupations of its students, topics manifestly of the greatest importance if we are to form an accurate and comprehensive idea of what a university of the Middle Ages really was. The life of medieval students is, however, a large and complex subject, exhibiting wide differences at different times and in different places, and no treatment of it will be in any sense adequate which does not rest on the detailed study and comparison of the conditions at each centre of learning and the changes they underwent at different periods.² Such an investigation demands the careful examination of a great variety of sources, literary, documentary and narrative, which are at present in large measure unpublished and whose value and interest for this purpose are by no means generally understood. The present article is designed to call attention to one class of these sources, student letters, and to point out how far they throw light on the academic conditions of their time.

The intellectual life of the Middle Ages was not characterized by spontaneous or widely diffused power of literary expression. Few were able to write, still fewer could compose a letter, and the professional scribes and notaries on whom devolved the greater part of the labor of medieval correspondence fastened upon the letter-writing of the period the stereotyped formalism of a conventional rhetoric. Regular instruction in the composition of letters and official acts was given in the schools and chanceries, and numer-

¹Reprinted from *The American Historical Review*, January, 1898.

²On the proper methods to be followed in studying the history of medieval civilization, too often treated in a dilettante and uncritical fashion, see the excellent observations of Langlois in the *Revue Historique* (1897), LXIII, 246 ff.

ous professors, called *dictatores*, went about from place to place teaching this valuable art—"often and exceeding necessary for the clergy, for monks suitable, and for layment honorable," as one rhetorician tells us.³ Beginning with the latter part of the eleventh century, we find brief manuals of epistolography in which definite rules of composition are laid down and the order and form of the various parts of a letter fixed. According to the usual theory there should be five parts arranged in logical sequence. After the salutation—as to which the etiquette of the medieval scribes was very exacting, each class in society having its own terms of address and reply—came the exordium, consisting of some commonplace generality, a proverb, or a scriptural quotation, and designed to put the reader in the proper frame of mind for granting the request to follow. Then came the statement of the particular purpose of the letter (the narration), ending in a petition which commonly has the form of a deduction from the major and minor premises laid down in the exordium and narration, and finally the phrases of the conclusion.

The construction of a letter in accordance with this elaborate scheme was, however, possible only for those who had attained some proficiency in the epistolary art; for the ordinary man the writing of a letter meant, not the composition of an original epistle of his own, but the laborious copying of a letter of some one else, altered where necessary to suit the new conditions. It is in this way that the greater part of medieval correspondence has come down to us, preserved not as personal mementos or sources of historical information, but as models for future letter-writers. Frequently these models would be copied and added to until they grew into considerable collections, which might find use as independent compilations of forms or be joined as illustrations to the various current treatises on the art of composition. It must not be supposed that all of the letters contained in these useful collections were actual pieces of correspondence. The authors of rhetorical manuals did not hesitate to compose models of their own or to incorporate exercises of their pupils, possible letters, but not actual ones, and they needed to make large use of such inventions when they proposed, as did many, to provide "complete letter-writers" containing examples suited to every occasion and condition in life. Where real letters were used the names were often omitted or altered beyond recognition, while sometimes lists of pure fancy—letters to or from Venus, Lent, Rhetoric, the Devil, and similar personages⁴—would find their way into these strange compilations.

It is evident that the collections of letters which have come down to us

³Albert of Samaria, in Rockinger, *Briefsteller und Formelbücher*, Munich: 1855. p. 84.

⁴*Oxford Collectanea*, I. 42-49.

from the Middle Ages differ widely in character and contents and, consequently, in the nature of the information they afford the historian. The correspondence of known individuals has obviously a very different value from a series of anonymous or invented models, and the difficulty of distinguishing the real from the fictitious is one reason for the relatively small use that has been made of these formularies. While, however, the student of diplomatics in his search for authentic and datable acts cannot exercise too great caution in utilizing material of this sort, the danger to the student of social conditions is much less. To him a possible letter may yield as valuable information as an actual letter, provided he can satisfy himself as to the place and time of its composition and the good faith of its author. He will not seek in these formulae trustworthy details of biography or of political history, but he may well expect them to reflect faithfully, because unconsciously, the conditions of the age in which they were composed, and thus add to the stock of material, none too large at best, available for the history of medieval civilization. The models were written to be used; and the more closely they corresponded to the needs of the user the greater the popularity of the *dictator* and his manual. Most of all is this true in cases relating to student affairs, since the collections of forms and the treatises on rhetoric were generally put together in the schools and for the use of scholars—some of the most famous are directly connected with Orléans and Bologna—so that even where they were the product of direct invention they would be likely to represent correctly the life of the academic environment in which they arose.

The number of extant letters and forms of letters which concern the life of the medieval student is very great. Of the hundreds of formularies and collections of letters preserved in every large European library, probably the greater number contain some reference to student affairs, and several seem to have been composed with special regard to the needs of students and their parents. All kinds of schools and all parts of Europe are here represented: cathedral schools like Hildesheim⁵ and Chartres,⁶ lower schools like those of Arbois⁷ and St. Denis,⁸ and nearly all the important university centres—Bologna, Pavia, Padua, and Siena, Vienna and Leipzig, Prague and Erfurt, Oxford and Cambridge, Salamanca, Toulouse, Montpellier, Orléans and Paris. An exhaustive critical study of this mass of student correspondence is not at present possible, as the greater part of it is still unpublished and

⁵Sudendorf, *Registrum*, III. 30–36.

⁶*Bibliothèque de l'École des Chartes*, 1855, 454 ff.

⁷Bibliothèque Nationale, MS. Lat. 8653A; a student's notebook of the fourteenth century containing, besides a collection of proverbs and a vocabulary, a number of forms of correspondence composed about the year 1316.

⁸Letters in the same library, MS. Lat. 15131, ff. 177–189.

many of the manuscripts have not been catalogued, while the sources of the various letters and the relations of the collections to one another have yet in most cases to be determined. The present inquiry has been restricted to printed works and to the manuscripts of Paris, Munich, London, and Oxford.⁹ While absolute completeness cannot be claimed, even within these limits, the material examined has been sufficient to make the results reasonably representative.

By far the largest element in the correspondence of medieval students consists of requests for money—"a student's first song is a demand for money," says a weary father in an Italian letter-writer, "and there will never be a letter which does not ask for cash."¹⁰ How to secure this fundamental necessity of student life was doubtless one of the most important problems that confronted the medieval scholar, and many were the models which the *dictatores* placed before him in proof of the practical advantages of their art. The letters are generally addressed to parents, sometimes to brothers, uncles, or ecclesiastical patrons—a much-copied exercise contained twenty-two different methods of approaching an archdeacon on this ever delicate subject.¹¹ Commonly the student announces that he is at such and such a centre of learning, well and happy but in desperate need of money for books and other necessary expenses. Here is a specimen from Oxford, somewhat more individual than the average and written in uncommonly bad Latin:¹²

"B. to his venerable master A., greeting. This is to inform you that I am studying at Oxford with the greatest diligence, but the matter of money stands greatly in the way of my promotion, as it is now two months since I spent the last of what you sent me. The city is expensive and makes many demands; I have to rent lodgings, buy necessities, and provide for many other things which I cannot now specify. Wherefore I respectfully beg your paternity that by the promptings of divine pity you may assist me, so that I may be able to complete what I have well begun. For you must know that without Ceres and Bacchus Apollo grows cold."¹³

Sometimes the supplies needed—books and parchment, trousers, linen,

⁹At Oxford it was necessary to confine investigation to the Bodleian, where very little was found; something more might perhaps be discovered in the libraries of the colleges.

¹⁰"Primum carmen scolarium est petitio expensarum, nec umquam erit epistola que non requirit argentum." Buoncompagno, *Antiqua Rhetorica*, in MS. Lat. 8654, f. 14v.

¹¹Published by Bärwald in *Fontes Rerum Austriacarum*, second series, XXV. 455-464, from a fourteenth-century MS. in Vienna.

¹²The text of the formularies of the Middle Ages is frequently quite corrupt; in many cases it is clear that the copyists did not understand the meaning of what they wrote.

¹³British Museum, Add. MS. 8167, f. 104 (collection dating from 1220 or soon after).

bedding, etc.—are sought directly from home. In an interesting set of letters written from Chartres at the beginning of the twelfth century and quite unspoiled by the phrases of the rhetoricians, we find two brothers asking their mother for thick lambs' skins for winter clothing, parchment for making a psalter, their father's great boots, and some chalk, good chalk, since theirs is worth nothing.¹⁴ A Vienna student who writes to his father N., citizen of Klosterneuburg, that he has spent his money for books and other things that pertain to learning, receives in reply "by this present messenger ten Rhinish gulden, seven ells of cloth for a cloak, and one pair of stockings."¹⁵

If the father was close-fisted, there were special reasons to be urged: the town was dear—as university towns always are!—the price of living was exceptionally high owing to a hard winter, a siege, a failure of crops, or an unusual number of scholars; the last messenger had been robbed or had absconded with the money; the son could borrow no more of his fellows or of the Jews; and so on. The student's woes are depicted in moving language, with many appeals to paternal vanity and affection. At Bologna we hear of the terrible mud through which the youth must beg his way from door to door, crying, "O good masters," and bringing home nothing unless the Lord go with him.¹⁶ In an Austrian formulary a scholar writes from the lowest depths of prison, where the bread is hard and moldy, the drinking water mixed with tears, the darkness so dense that it can actually be felt. Another lies on straw with no covering, goes without shoes or shirt, and eats he will not say what—a tale designed to be addressed to a sister and to bring in response a hundred sous *tournois*, two pairs of sheets, and ten ells of fine cloth, all sent without her husband's knowledge.¹⁷ In another form of appeal to the sister's mercy, the student asks for the loan of twenty sous from her, since he has been so short a time at school that he dares not make the demand of his parents, "lest perchance the amount of his expenses displease them."¹⁸

To such requests the proper answer was, of course, an affectionate letter, commending the young man's industry and studious habits and remitting the desired amount. Sometimes the student is cautioned to moderate his expenses—he might have got on longer with what he had, he should remember the needs of his sisters, he ought to be supporting his parents instead of trying

¹⁴*Bibliothèque de l'École des Chartes*, 1855, 454–455.

¹⁵Munich Cod. Lat. 11799, ff. 4–5.

¹⁶Buoncompagno, *op. cit.*, in Munich Cod. Lat. 23499. f. 9v.

¹⁷Ponce de Provence in British Museum, Arundel MS. 514. f. 76v.

¹⁸Munich Cod. Lat. 6911, f. 54v.

to extort money from them, etc. It often happened, too, that the father or uncle has heard bad reports of the student, who must then be prepared to deny indignantly all such aspersions as the unfounded fabrications of his enemies. Here is an example of paternal reproof taken from an interesting collection relating to Franche-Comté:

"To his son G. residing at Orléans P. of Besançon sends greetings with paternal zeal. It is written, 'He also that is slothful in his work is brother to him that is a great waster.' I have recently discovered that you live dissolutely and slothfully, preferring license to restraint and play to work and strumming a guitar while the others are at their studies, whence it happens that you have read but one volume of law while your more industrious companions have read several. Wherefore I have decided to exhort you herewith to repent utterly of your dissolute and careless ways, that you may no longer be called a waster and your shame may be turned to good repute."¹⁹

In the models of Ponce de Provence we find a teacher writing to a student's father that while the young man is doing well in his studies, he is just a trifle wild and would be helped by judicious admonition. Naturally the master does not wish it known that the information came through him, so the father writes his son:

"I have learned—not from your master, although he ought not to hide such things from me, but from a certain trustworthy source—that you do not study in your room or act in the schools as a good student should, but play and wander about, disobedient to your master and indulging in sport and in certain other dishonorable practices which I do not now care to explain by letter." [Then follow the usual exhortations to reform.]²⁰

The arrival of students at school is frequently the occasion of letters to parents describing their new surroundings, as in the following illustration, which comes from Orléans:

To their dear and respected parents M. Martre, knight, and M. his wife, M. and S. their sons send greeting and filial obedience. This is to inform you that, by divine mercy, we are living in good health in the city of Orléans and are devoting ourselves wholly to study, mindful of the words of Cato, "To know anything is praiseworthy." We occupy a good dwelling, next door but one to the schools and market-place, so that we can go to school every day without wetting our feet. We have also good companions in the house with us, well advanced in their studies and of excellent habits—an advantage which we well appreciate, for as the Psalmist says, "With an upright man thou wilt show thyself upright." (*Psalms*, XVIII. 25.) [Then follows the inevitable demand for money, this time for the purchase of a

¹⁹Bibliothèque Nationale, MS. Lat. 8653A, f. 9.

²⁰Munich Cod. Lat. 22293. f. 278v.

desk, ink, and parchment, and the letter closes by saying that the bearer will take charge of the books and shoes their parents have to send and will also bring any message they may desire him to convey.]²¹

The student's journey and arrival were not always so prosperous, and the famous Bolognese dictator Buoncompagno devotes a chapter of his collection to the accidents that may befall one on the way to the university.²² Attacks from robbers seem to have been the chief danger; the scholar was hastening to Bologna, for the love of letters, but in crossing the Alps he was attacked by highwaymen, who took away his books, clothing and money, so that he has been obliged to remain in a neighboring monastery till help can reach him. In other instances the robbery takes place in the forest of Bologna, or in the highway near Aosta.

Once safely arrived at a centre of learning, medieval students were slow to quit academic life. Again and again they ask permission to have their term extended; war might break out, parents or brothers die, an inheritance have to be divided, but the student pleads always for delay. He desires to "serve longer in the camp of Pallas";²³ in any event he cannot leave before Easter, as his masters have just begun important courses of lectures. A scholar is called home from Siena to marry a lady of many attractions; he answers that he deems it foolish to desert the cause of learning for the sake of a woman, "for one may always get a wife, but science once lost can never be recovered."²⁴ In a similar case another student holds out against the claims of a proposed wife, who, "though she is dark, is clever and of placid demeanor, good, wise and noble, and moreover has a considerable dower and belongs to an influential family."²⁵ Sometimes, however, the student is taken ill and writes for money and an easy-going horse to take him home,²⁶ while occasionally he discovers his inability to learn and asks to enter the army or some other more congenial occupation.²⁷

As is indicated by letters already cited, one of the first cares of a student was to provide himself with a suitable room. Various models show that it was usual to secure accommodations in advance through acquaintances, a necessary precaution when the number of new students was uncommonly great. Frequently the student's father places him under the care of a relative or friend, or he may ask the master to take special charge of the young man

²¹Bibliothèque Nationale, MS. Lat. 1093, f. 82v.

²²See the table of contents of Rockinger, *op. cit.*, p. 134.

²³Berlin MS. Lat. oct. 136, f. 112v.

²⁴Guido Faba, *Parlamenti ed Epistole*, 16-19.

²⁵Bibliothèque Nationale, MS. Lat. 8661, f. 98.

²⁶*Histoire Littéraire*, XXXI. 30.

²⁷Munich Cod. Lat. 22293, f. 281.

and his spending money. Ponce de Provence has left us models of all necessary correspondence between fathers and teachers—how the son is sent and received, the reports of his conduct and the appropriate parental admonitions, statements of his progress and of the completion of his studies, and finally the letter sending the master his pay with the father's thanks.²⁸ In an example written at Cambridge a master is asked to permit a student to visit his parents,²⁹ while in another letter of the same collection a young man announces that he will take his master home with him for two or three days at Christmas.³⁰

The letters of students make frequent mention of their books and studies, but do not add much to our information on these subjects. Books were, of course, in steady demand, and furnish a convenient occasion for appeals to the parental purse, although it might also happen that they would be left in a chest at home until sent for.³¹ From Orléans a student writes that he has become famous in dialectic, and desires to study theology if only his father will send him enough money to buy a Bible. The father praises his ambition but cannot afford the expense of a theological course—let the son turn to some of the "lucrative" professions.³²

Letters from all parts of Europe testify to the expense attendant upon securing a degree. Thus a student at Paris asks a friend to explain to his father, "since the simplicity of the lay mind does not understand such things," how at length after much study nothing but lack of money for the inception banquet stands in the way of his graduation.³³ From Orléans D. Boterel writes to his dear relatives at Tours that he is laboring over his last volume of law and on its completion will be able to pass to his licentiate provided they send him a hundred livres for the necessary expenses.³⁴

If we were to judge them by their own accounts, medieval students were models of industry and diligence, hearing in some instances at least three lectures a day and expecting soon to excel their professors as well as their fellows.³⁵ The *dictatores*, however, were well acquainted with other types of academic youth, who needed to be reminded that reward came, not from having been at Paris, but from profitable study there, and many are the forms of warning or reproof that they have left us. Buoncompagno indeed

²⁸British Museum, Arundel MS. 514, f. 70.

²⁹British Museum, Harleian MS. 3988, f. 49v.

³⁰*Ibid.* f. 45v.

³¹Munich Cod. Lat. 6911, f. 53.

³²British Museum, Arundel MS. 514, f. 73v.

³³Rockinger, *op. cit.*, p. 487.

³⁴Bibliothèque Nationale, MS. Lat. 8653A, f. 9v.

³⁵Munich Cod. Lat. 2649, f. 50.

has a rebuke for him who studies too much—who rises before the morning bell, is first to enter and last to leave the schools, spends the day in his room reading, ponders his lectures at meal-time, and even reviews and argues in his sleep—but he significantly adds that the same letter may be addressed to one who studies too little.³⁶

Letters to fellow students occupy a considerable place in these collections, but they are confined for the most part to messages of condolence, introductions, requests for news, protestations of friendship, and similar common-places. We also find students urging friends to join them at the university, arranging to make the journey together, or inquiring concerning the advantages of another place of study.³⁷ In case of the death or sudden departure of a student his effects were sent home by one of his fellows. At Bologna, at least, it was customary for the companions of a departing student to accompany him on horseback some miles on the way, and we even find outlines³⁸ of a proper speech of thanks to be made to these *transcursibiles amici*³⁹ when they turn back. Like his modern successor, the medieval student seems to have been an inveterate borrower. Sometimes it is a book for which he asks, more commonly a loan of money until a messenger arrives from home, and models are not lacking for demanding back the money or the book.⁴⁰

For obvious reasons, the letters of medieval students do not have much to say of what Mr. Rashdall calls "the wilder side of university life." We find a Paris scholar complaining of the disorders of the schools and expressing fear of personal violence,⁴¹ and a student at Toulouse writes that a certain P., against whom he had been warned before leaving home in Harbonne, had taken forcible possession of his room and so disturbed him in his work that he would like permission to go home at Easter.⁴² At Orléans a young man pleads for help from his father because, having quarrelled with a certain youth, as the devil would have it, he struck him on the head with a stick, so that he is now in prison and must pay fifty livres for his release, while his enemy is healed of his wounds and goes free.⁴³ That the pranks of students were not always severely judged we may perhaps infer from the letter of a professor of law at Orléans to a father at Besançon in which it is said that

³⁶Munich Cod. Lat. 23499, f. 4.

³⁷See for example the correspondence of two German students planning to study canon law at Bologna, in British Museum, Arundel MS. 240, f. 122. Acq. 1266.

³⁸Bibliothèque Nationale, MS. Lat. Nouv. Acq. 1266.

³⁹The phrase is *Buoncompagno's*.

⁴⁰Munich Cod. Lat. 6911, f. 53.

⁴¹*Ibid.*, f. 54.

⁴²*Ibid.*, f. 55.

⁴³British Museum, Arundel MS. 514, f. 74.

while no doubt the man's son G. was one of a crowd that had sung a ribald song on an organ, the matter was of no importance, as the young man's general record was good and he was making excellent progress in law.⁴⁴

It is evident from this brief examination of the letters of medieval students that their correspondence has to do chiefly with the commonplace and everyday aspects of life at the school and university. Lambskin cloaks, parchment, and the inception banquet belong plainly in the Middle Ages and nowhere else, but money and clothing, rooms, teachers and books have been subjects of interest at all times and in all places. This characteristic of the letters is in some respects disappointing—we might have known quite independently, it may be urged, that the medieval student wanted money and tried to extort it from his father, borrow it from his fellows, or beg it from others; we might have known that they were robbed by highwaymen and rebuked by their parents. What a pity that out of such a mass of letters there are none that tell us in simple and unaffected detail how a young man studied and how he spent his day! To all this the answer is that under the conditions then prevailing very few such letters could have been written, and, if written, there was no reason why a matter of such individual and temporary interest should be preserved. It was precisely because they were trite and banal, because they voiced the needs of the great student body everywhere and always, that these letters and models were considered useful to others and hence were copied and kept. It is certainly worth something for us to know what were the commonplaces of existence in the schools of the Middle Ages, and to realize more vividly those phases of student life which we might otherwise lose from view. One may, of course, easily be deceived by the modern atmosphere with which such letters, read without reference to their sources of information, surround the medieval student, and yet from one point of view their value lies just here. We need to be reminded again and again that the fundamental factors in man's development remain much the same from age to age and must so remain as long as human nature and physical environment continue what they have been. A just historical view requires accurate appreciation of both the constant and the varying elements in the history of civilization; the present article may perhaps serve to illustrate something of their relative importance in the life of the medieval student.

⁴⁴Bibliothèque Nationale, MS. Lat. 8653A, f. 10.

THE STORY OF THE CHRISTMAS SEAL¹

Carolyn Burwell

IN THE city of Copenhagen, the annual Christmas mail rush was in full swing. The regular and extra postal employees were working day and night so that the thousands of letters and packages would reach their destinations before the great day. Among the mail sorters was one Einar Holboll. He was thinking about the great number of wishes for health, happiness, and good cheer that were being sent upon their way. Suddenly, a wonderful idea came to him. Why could these letters and packages not bear more than just good wishes? Why could they not carry special stamps which had been bought for a small amount in order to secure good health and happiness for every one in Denmark? Thus, in 1903, the idea of a Christmas seal for charity was born.²

During the following year, Holboll worked to make his dream come true; and at Christmas time a small half-penny stamp was offered for sale. It was much the same size and shape as our Christmas Seals and bore the picture of Louise, the queen of Denmark, who had died six years before.³ Because the post offices and mail carriers made the cause their own special one, three and three-fourth million seals were sold the first year, an average of one and a fourth seals for every man, woman, and child in Denmark. Each year since, the receipts have increased in spite of war and hard times; for the Danes feel that a letter is not a real Christmas letter unless it bears one of the little seals.⁴

In 1904, the first Christmas Seal Committee, consisting of Holboll and fourteen others, was formed. It decided that the money which was raised would be used to build sanitoriums. In 1912, the first institution was built with the seal money. This institution at Kolding Fjord, Denmark, was the first in the world exclusively for children.⁵ Many other sanitoriums have been built since which have helped to give that health and happiness which Einar Holboll wanted for the people of Denmark.

Holboll died in 1927; but "his great idea, the Christmas Seal, has made its victorious progress all over the world."⁶ "All kinds of people buy Christmas

¹A paper submitted in Freshman English at the University of Minnesota in 1940.

²Leigh Mitchell Hodges, "The Seal Against Fate," *The Reader's Digest*, Vol. 29, No. 176 (Dec., 1936), p. 19.

³*Thanks for Health Day Newspaper*, p. 12.

⁴J. B. Nikolaisen, "Holboll and the Christmas Seal," *The American-Scandinavian Review*, Vol. XXVII, No. 4 (Dec., 1939), p. 297.

⁵*Ibid.*, pp. 298-299.

⁶*Ibid.*, p. 302.

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Seals, the white man, the Negro, the yellow man, the rich, the poor, kings and queens and presidents, boys and girls from lands besides . . . [Holboll's] own."⁷

The United States was among the first countries to adopt the Christmas Seal. It was brought about mainly through the work of Emily P. Bissell of Wilmington, Delaware.⁸ Jacob Riis, who received a Danish Christmas Seal on one of his letters, wrote an enthusiastic article in *The Outlook* proposing the use of Christmas Seals in the United States. Miss Bissell was inspired by this story to design a similar seal, in 1907, to raise money for a tuberculosis sanatorium of eight beds.⁹

The seals did not sell well at first; therefore, Miss Bissell went to Philadelphia, hoping to get aid from the *North American*, a widely read newspaper in that part of the country. The Sunday editor could not see much sense in the seals, but a columnist, Leigh M. Hodges, saw a great deal of sense in them. He took them to the publisher, E. A. Van Valkenburg, shouting, "Here's a way to wipe out tuberculosis!"¹⁰ After a brief explanation, the elder man agreed to give Miss Bissell all the space she needed in the paper.

"The *North American* bought 50,000 stamps. When they first went on sale in its street-floor office, a ragged newsboy came in. Reaching up to a marble counter higher than his head, he laid down a copper and said, 'Gi' me one. Me sister's got it.' Those seven words settled it. If a street kid could get the message, the messenger was the kind needed. Next day the whole editorial space carried a plea for people to 'buy these bullets in the battle against our worst foe.'"¹¹

Because the first seal sale was a great success, the American Red Cross sponsored the sale in 1908 and 1909.¹² The following year, the National Tuberculosis Association, which had been established in 1904, formed a partnership with the Red Cross. The Red Cross put its name, emblem, prestige and financial backing into the partnership. The National Tuberculosis Association organized and promoted the actual sale. It was also given supervision over the spending of the funds.¹³ This partnership was dissolved in 1920, when the National Tuberculosis Association was given exclusive use of the seals for its support.

⁷P. P. Jacobs, *Christmas Seals Around the World*, p. 5.

⁸"Two Stamps on Christmas Cards," *Public Health Nursing*, Vol. 31, No. 12 (Dec., 1939), p. 660.

⁹H. E. Kleinschmidt M.D., *Tuberculosis*, pp. 70-71.

¹⁰Leigh Mitchell Hodges, "The Seal Against Fate," *The Reader's Digest*, Vol. 29, No. 176 (Dec., 1936), p. 20.

¹¹*Ibid.*

¹²H. E. Kleinschmidt M.D., *Tuberculosis*, p. 71.

¹³*Talking Points About Tuberculosis*, p. 10.

The National Tuberculosis Association then automatically took over the designing and printing of the seals. At this time, the Association adapted the double-barred cross, which already was the emblem of the world-wide tuberculosis movement, as its symbol.¹⁴ Each year a different Christmas Seal is printed, but the double-barred cross always appears in the design.¹⁵ Each year millions of people express the wish of "Good will to men" by buying these penny seals.¹⁶

In 1938, a new custom was established in printing the seals. Each sheet of one hundred honored the four leaders in the fight against tuberculosis by a special seal in each corner bearing their portraits. They were: Laennec, who invented the stethoscope; Koch, who discovered the tuberculosis germ; Trudeau, who opened the first sanatorium in the United States; and Holboll, who conceived the idea of the Christmas Seal.¹⁷ Every year since, four seals in each sheet have been set aside for a similar purpose.

These seals, which are the chief means of support of tuberculosis associations, are now sold by the local associations which are continually being established in counties, cities, and villages. The last of the forty-eight state societies was organized in 1917.¹⁸ Now the same seal is sold in every state and section of the United States and in the outlying territories and possessions.¹⁹

The fair way in which the funds have been divided among the local, state, and national associations has been largely responsible for the steady growth of the movement.²⁰ Of the annual proceeds from the sales conducted by the local associations five per cent goes to the National Association; and a certain percentage, depending upon the needs of the local association, goes to the state.²¹

Among the hundreds of local associations, the Hennepin County Tuberculosis Association has maintained one of the most excellent records in the promotion of the Christmas Seal sales. The association was started in 1903 by the late Mrs. George H. Christian of Minneapolis, who had lost a brilliant young son because of tuberculosis. After his death she took up work which would help to prevent further loss of life from the disease.²²

¹⁴*Talking Points About Tuberculosis*, p. 10.

¹⁵W. W. Charters, *The Message of the Double-Barred Cross*, p. 2.

¹⁶"How the Pennies Are Put to Work," *Hygeia*, Vol. 10 (Dec., 1932), p. 1117.

¹⁷"Christmas in the Home," *Journal of Home Economics*, Vol. 30, No. 7 (Sept., 1938), p. 477.

¹⁸*The Christmas Seal*, p. 5.

¹⁹P. P. Jacobs, *Christmas Seals Around the World*, Intro.

²⁰*The Christmas Seal*, p. 6.

²¹H. E. Kleinschmidt M.D., *Tuberculosis*, p. 71.

²²*Thanks for Health Day Newspaper*, p. 8.

In 1909, as president of the Hennepin County Tuberculosis Association, Mrs. Christian sold the first seals to be sold in the county. She and a friend, Mrs. Thomas F. Kinney, were driven around Minneapolis by Mrs. Kinney's daughter. At almost every small drug store and grocery store in Minneapolis, a small package of seals was left; and the store keepers were asked to try to sell the seals to their customers. After Christmas the small amounts of money and any unsold seals were collected from each little store by these women. Although the money raised in this way was not a very large sum, the Christmas Seal and the meaning behind it had become familiar to most of the citizens of Minneapolis, who have gradually made the buying of these seals an annual custom.

The proceeds from the sale of seals, besides supporting the tuberculosis associations, have promoted many lines of defense against tuberculosis. The most important of these is the education of the public in basic facts about tuberculosis so that they can protect themselves against it.²³ This is done mainly through literature, posters, lectures, radio broadcasts, motion pictures, slides, and exhibits.²⁴

The early discovery of all unknown cases of tuberculosis forms another important line of defense.²⁵ Over a thousand clinics for the diagnosis and discovery of the disease are supported entirely or partly by seal funds.²⁶ With the Tuberculin Test of today, anyone who goes to these clinics for examination can know within forty-eight hours whether tuberculosis germs are at work in his body.²⁷ This early discovery not only prevents the spread of the disease to other persons but also gives the infected person a better chance to be completely cured.

The Christmas Seal funds are also spent to treat tubercular people.²⁸ The only known cure was discovered by Dr. Edward Livingston Trudeau. It consists of rest, fresh air, and good food.²⁹ Twelve hundred sanitoriums and hospitals, twelve hundred summer camps and open air schools for children,

²³"The Christmas Seals," *Journal of Home Economics*, Vol. 27, No. 10 (Dec., 1935), p. 656.

²⁴"Buy Christmas Seals," *Hygeia*, Vol. 13 (Dec., 1935), p. 1141.

²⁵"The Christmas Seals," *Journal of Home Economics*, Vol. 27, No. 10 (Dec., 1935), p. 656.

²⁶"The Christmas Seal Makes Its Annual Appearance," *Hygeia*, Vol. 14 (Dec., 1936), p. 1144.

²⁷Leigh Mitchell Hodges, "The Seal Against Fate," *The Reader's Digest*, Vol. 29, No. 176 (Dec., 1936), p. 22.

²⁸"The Christmas Seals," *Journal of Home Economics*, Vol. 27, No. 10 (Dec., 1935), p. 656.

²⁹"Buy Christmas Seals," *Hygeia*, Vol. 13 (Dec., 1935), p. 1142.

and ten thousand public health nurses are able to apply Trudeau's remedy because of the support which is given to them by the seal.³⁰

The Christmas Seal organization has already planned its 1940 fight against tuberculosis. "Intensified efforts towards early discovery and prevention of tuberculosis are planned by the Christmas Seal organization to include tuberculin testing and X-raying of school children, promotion of hot lunch projects, and instruction in good health habits."³¹ "As long as this fundamental institution, the Christmas Seal, is preserved and advanced, so long will the tuberculosis movement receive renewed impetus for further conquests of the disease and the promotion of public health."³²

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Reviews

FREE LAND BY ROSE WILDER LANE • HOWARD MUMFORD JONES

I'M A STRANGER HERE MYSELF BY OGDEN NASH • LOUIS UNTERMAYER

REBECCA BY DAPHNE DU MAURIER • BASIL DAVENPORT

I MARRIED ADVENTURE BY OSA JOHNSON • CLIFTON FADIMAN

WRITERS AND WRITING BY ROBERT VAN GELDER • DENVER LINDLEY

LEE'S LIEUTENANTS BY DOUGLAS SOUTHALL FREEMAN • DAVID M. POTTER

FREE LAND¹

[By ROSE WILDER LANE. New York: Longmans, Green & Co., 1938]

Howard Mumford Jones

THIS might be described as a novel of the weather. I do not recall any recent book of my reading which is so full of blizzards and general climatic cussedness, and having dug myself out of the snow for the nth time, lived through a tornado, endured two or three hot spells, twisted hay to burn in the stove, gone on rescuing parties to dig up the frozen, and shovelled snow off the railway track for miles to let the dad-burned train through with supplies, I arrived at page 332 in a state of physical toughness which led me to imagine I was one of the original settlers in Dakota. And then I was considerably worried about debt. I went in one deceptive summer worth something over a thousand dollars, but by page 319 I was carrying a hundred dollars a year in interest on my debts, and if father hadn't advanced me two thousand on the last page, I don't know what I would have done.

"Free Land" is a novel of weather and the farm, of things and events rather than of persons. The hero and heroine are sufficient for the purpose of the tale, which is to show the heroism and suffering with which the Dakota plains were broken to the plough. The theme song is the once popular ditty:

O Dakota land, sweet Dakota land!
As on thy burning soil I stand
And look away across the plains
I wonder why it never rains.

Wisely or unwisely, David Beaton will not be licked by heat or blizzards, horse thieves or borrowed money, but clings to his soddy, improves it, rears a couple of children, plants turnips, buys oxen, and heroically—and cheerfully—works on to the end of the book, aided by his wife and helped by (and helping) his neighbors.

There is a refreshing absence of physical violence, cruelty, and bucolic despair in the book. This does not mean that violent events do not occur, but they are not played up for the sake of ferocity. Attention is centered rather on the quiet heroism of human nature, on its ability cheerfully to endure sorrow and catastrophe. Possibly because Mrs. Lane seems to be more interested in creating an authentic picture of farm life during the

¹This review and the two which follow are from *The Saturday Review of Literature*.

early days of the Dakota land boom, David and Mary persistently remain a little thin; they have almost no internal life because they are forever shown struggling with the elements. The minor characters suffer from the same cause.

The writing is simple, honest, and direct. The quiet heroism of the Dakota settlers is, of course, appealing, but the novel seems more important as document than as work of art. As a document it is an interesting fictional chapter in American history. Thus, indeed, one says to himself, did they toil to create another American state. Mrs. Lane steers a middle course between the heroic-pioneer school of writing and the dreadful-life-on-the-farm school of writing; the result is a pleasantly written book which restores one's faith in ordinary men and women.

I'M A STRANGER HERE MYSELF

[By OGDEN NASH. Boston: Little, Brown and Company. 1938]

Louis Untermeyer

OGDEN NASH has been both overpraised and underrated; his stock has gone up and down and up again; his highs are often confused with his lows. Nevertheless, in a rapidly changing world and a nervously fluctuating market, he has always had more orders than he could fill. Although highly salable, his work is interesting to brows of all altitudes; it is intelligent and always unpredictable. Nash is, therefore, something of a phenomenon as poet and producer, and he merits a more detailed stocktaking than he has received.

There are, first of all, Nash's two most obvious characteristics. Both of them are curiosities in technique: the long, asymmetrical lines, and the elaborately inexact rhymes. One or two fanatical source-hunters have found the origin of Nash's lengthy eccentricities in Gilbert's "Lost Mr. Blake." But an unprejudiced comparison will show that the two styles have nothing in common. Apart from the almost opposite idioms, Gilbert's lines are consistently long and fairly regular, while Nash's line-lengths vary from two to sixty-two syllables; Nash's unmatched and unscannable lines are his own, a distinct technical departure. Nevertheless, I do not think they are particularly effective. Their charm is the frail charm of the unexpected; with each repetition the surprise is a little less surprising—so much so that when Nash, after

hundreds of purposefully shapeless verses, printed a few poems in traditional meters, his readers were really surprised. In the present volume, as in the preceding, "The Bad Parents' Garden of Verse," the keenest as well as the most comical verses are those in which the rhythm is regular and the lines quite orthodox in shape. I would be disposed to put the "invention" of the irregular line on the debit side.

The rhymes are another matter. Here the reader is constantly and incredibly assaulted by a shock which is partly esthetic and partly galvanic. A rhyming word is usually a preparation for another rhyming word; Nash delights the reader with the pleasure of inexactitude, with words that rhyme reluctantly, with words that nearly-but-do-not-quite rhyme, with words which never before had any relation with each other and which never again will be on rhyming terms. These distortions are at their best when they are their worst. What reader can fail to be startled when confronted with a poem which begins:

Oh, sometimes I sit around and think,
 what would you do if you were up
 a dark alley and there was Caesar
 Borgia,
 And he was coming torgia,
 And brandished a poisoned poniard,
 And looked at you like an angry fox
 looking at the plumpest rooster in
 a boniard?

Such rhymes are as delightful as they are astonishing; they are like apparently improvised speeches in which the errors are more lively—and more likable—than the prepared accuracies. I should say that Nash's calculated recklessness in rhyme belongs definitely on the credit side.

Nash has been applauded for his industry and his verbal ingenuities. Both are virtues, but they become vices with Nash. For one thing, he writes too much. At first his work seems amazing; then it becomes amusing; after too many repetitions of the same effects, it descends to the mechanical. The present volume contains almost three hundred pages; were it half as long it would be twice as good. Productiveness not only compels Nash to pad but to pretend. He has to pretend to be funnier than he really is, or to be funny when he wants to be serious, or to give a "snap" to a title which might better have been casual or noncommittal. I feel he is working too hard when he forces himself to such titles as "To Bargain, Toboggan, To-Wool" "Boop-Boop-Adieup, Little Group!" "Man Bites Dog-Days," "Where There's a Will, There's Velleity," "Little Miss Muffet Sat on a Prophet," "Barmaids Are

Diviner than Mermaids." Working overtime and straining too often puts much of Nash's output on the debit side.

But the rest of Nash belongs on the sunny side of the ledger. His verse always makes good reading; often it is the best light verse written in America today. The territory might be extended to include England, for, with the possible exception of A. P. Herbert, there is no one here or abroad who can surpass the straight-faced absurdity of "Adventures of Isabel," the sensible nonsense of "Curl Up and Diet," the clipped but devastating disposals of "Fellow Creatures." Nash's "The Bad Parents' Garden of Verse," and in particular "The Tale of Custard the Dragon," proved he could be as nimble and original as A. A. Milne; page after page in the present volume proves he can take the leap from childlike fancy to social satire in one effortless stride. It is hard for me to understand why no musician, manager, or theatrical producer has made Nash supply book and lyrics for a series of native comic operas, especially since there seems to be an almost hopeless search for librettists with imagination.

It is in this realm, the realm of incalculable imagination, that Nash is happiest and at his highest. Time and again he begins inconsequentially, with a wisp of an idea, or with no thought at all. Once upon a time, he mumbles to himself, there was a man named Mr. Strawbridge. Strawbridge rhymes with drawbridge, and so the poem not only is about Mr. Strawbridge who wanted a drawbridge, but about what kind of a drawbridge would please him best. He wanted it because he wanted to interfere with traffic; on his house he had a veranda built (rhyming with Vanderbilt) so that he could look at the Atlantic Ocean,

But he said sometimes on Sundays and
holidays he couldn't see the Atlantic
for the motorists,
And he said he'd rather see the former
than the latter even though they were
handsome and respectable Kiwanians
and Lions and Rotarists,

And so the poem goes wildly on from one mad fantasy to another—and all because the name of Strawbridge popped into Nash's oddly proportioned mind.

Nonsense and criticism elbow each other in Nash; he is crazy storyteller one moment, a satirist the next, a wit who takes to clowning to correct pretense and expose hypocrisy. Playfully but incisively he makes his summaries with the deceptive calm of the following "tribute":

REBECCA · BASIL DAVENPORT

How courteous is the Japanese;
He always says, "Excuse it, please."
He climbs into his neighbor's garden,
And smiles, and says, "I beg your pardon";
He bows and grins a friendly grin,
And calls his hungry family in;
He grins, and bows a friendly bow:
"So sorry, this my garden now."

Such moments occur frequently enough to lift Nash above his own pleasant insanities; they are funny, but they are wryly, seriously humorous. Some day the committee which gratifyingly awarded a Pulitzer Prize to Morrie Ryskind, George S. Kaufman, and the Gershwins for "Of Thee I Sing" will give Nash that honor for adding a new approach, a new style, and a new meaning to American social verse. This will be as much a surprise to the committee as it will be to Mr. Nash.

REBECCA

[By DAPHNE DU MAURIER. New York: Doubleday, Doran & Co. 1938]

Basil Davenport

SO CINDERELLA married the prince, and then her story began. Cinderella was hardly more than a school-girl, and the overworked companion of a snobbish woman of wealth; the prince was Maximilian de Winter, whom she had heard of as the owner of Manderley in Cornwall, one of the most magnificent show places in England, who had come to the Riviera to forget the tragic death of his wife Rebecca. He was twice the little companion's age, but she conceived a starved girl's adoration for him when he was kind to her, and there was something about her freshness that seemed to please him. Then to her astonished rapture, he proposed marriage to her, and carried her off to the splendors of Manderley, in its forest of azaleas, sloping down to the sea that had drowned Rebecca, the first Mrs. de Winter—"Mrs. de Winter," simply, as everyone still calls her. For slowly and subtly the girl's dream changes to a nightmare. The great house where she cannot find her way, the first wife's shuttered bedroom, the servants who say that in Mrs. de Winter's time there were no complaints, and above all the old housekeeper, who keeps for the first Mrs. de Winter the ghoulish devotion of Phaedra's nurse or Electra's old slave—they all close in on her, like the monstrous azaleas. There was some mystery about Rebecca's death, too, as the village idiot knows; but

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the book is skillfully contrived so that it does not depend only on knowledge of it for its thrill; it can afford to give no hint of it till two-thirds of the way through. But the revelation, when it comes, leads to one of the most prolonged, deadly, and breathless fencing-matches that one can find in fiction, a battle of wits that would by itself make the fortune of a melodrama on the stage.

For this is a melodrama, unashamed, glorying in its own quality, such as we have hardly had since that other dependent, *Jane Eyre*, found that her house too had a first wife. It has the weaknesses of melodrama; in particular, the heroine is at times quite unbelievably stupid, as when she takes the advice of the housekeeper whom she knows to hate her. But if the second Mrs. de Winter had consulted with anyone before trusting the housekeeper, we should miss one of the best scenes in the book. There is also, as is almost inseparable from a melodrama, a forced heightening of the emotional values; the tragedy announced in the opening chapter is out of proportion to the final outcome of the long battle of wits that ends the book. But it is as absorbing a tale as the season is likely to bring.

I MARRIED ADVENTURE¹

[By Osa JOHNSON. Philadelphia: Lippincott, 1940]

Clifton Fadiman

THEY were Kansas products, both of them: the watchmaker's son who wasn't any too bright at school and the locomotive engineer's snub-nosed daughter. A couple of healthy and apparently almost dismally normal small-town kids, they married each other without any very solemn preliminaries and forthwith proceeded, with the aid of cameras, pygmies, head-hunters, cannibals, gazelles, lions, gorillas, and their own unusual qualities, to become Mr. and Mrs. Martin Johnson. The story of how this came about is now told in "I Married Adventure," a pleasant, forthright, occasionally exciting book by Osa Johnson, Martin's widow. It makes a canny bid for a number of audiences: camera fans, fireside explorers, animal lovers, and embattled feminist ladies, who will take vicarious satisfaction in Osa's ability to stand the gaff of hardship and danger as well as, or better than, the next man.

Martin, it seems, was a sort of Peck's Bad Boy, built by nature to run away from home. He liked cameras, animals, and geography, and it took him only a few years to fit these interests together and become the world's most famous photographer of the wild life, both feral and human, of the jungles of Borneo and Africa. Of course, as Osa affectionately makes clear, he had a few other qualities besides a liking for beasts and lenses. He was brave, resourceful, and had the kind of forceful simplicity that enabled him to sell his schemes for film-making to industrialists like George Eastman.

One other quality he possessed, which Osa doesn't mention—the sure touch of the born showman. He had the touch when, as a lanky kid, he started a small chain of nickelodeons, and exhibited the motion pictures of the trip he took with Jack and Charmian London in the *Snark*. He had the touch toward the end of his all too short life when, deciding that aerial photography would give the animal-and-exploring business a much-needed new twist, he and Osa learned to pilot a plane. Nor can it be denied that the Johnsons worked for all it was worth—and never for more than it was worth—the natural audience appeal that lay in the Mr.-and-Mrs. set-up. But for all the amiable kidding that the Johnsons inevitably got, there was never a suspicion of Barnum about their doings. Showmen? Certainly—but honest showmen. Never pretending to be anthropologists or trained naturalists, they took sound and often extraordinary pictures whose appeal was frankly dramatic, with a reasonable infusion of educational value.

¹Reprinted from *The New Yorker*.

"I Married Adventure" is about adventure, but it's also about a marriage. When Osa became Mrs. Martin Johnson, she had not the remotest notion that she was going to spend the next twenty years of her life inducing testy cannibals to perform antics before the camera, shooting elephants in the nick of time, eating monkey meat, and helping to boss two hundred natives in the middle of nowhere in Africa. Apparently, Martin picked a wife out of air, and she was, by a miracle, precisely the one he needed. There never was any problem of adaptation. The little girl from Chanute, Kansas, took to head-hunters and rhinoceroses with as much untroubled ease as most of her schoolmates took to double boilers and the Thursday-afternoon bridge club. Whenever the Johnsons set about planning an expedition, some well-meaning old professional was bound to say, "That's no trip for a woman." That was all Osa needed to hear.

The style of "I Married Adventure" does not exist. It might be described as homespun had Osa ever had any settled home. She writes about as her husband talked when he lectured—with complete simplicity and lack of affectation better than the subtlest of platform tricks. Several times the story works in episodes that are genuinely thrilling, and once or twice—I think of Martin's lecture to the nine thousand Salt Lake City school children just before his tragic death—it touches the heart.

The eighty-three aquatone illustrations, many of them from stills, present the Johnsons, George Eastman, Jack London, native chiefs, gorillas, zebras, leopards, giraffes, hyenas, elephants, the then Duke and Duchess of York, and honey bears in a variety of graphic and appealing attitudes.

WRITERS AND WRITING¹

[By ROBERT VAN GELDER. New York: Charles Scribner's Sons. 1946]

Denver Lindley

"THE way to know a man," Mr. van Gelder remarks in the introduction to this book, "is to listen to him ramble and just give him a nudge now and then to keep him going." This seemingly simple device is not the one commonly used by interviewers: Mr. van Gelder, who is editor of *The New York Times Book Review*, has used it consistently in assembling many interviews for that publication. The present selection demonstrates that in his hands it has produced unique results. The writers themselves

¹From *The New York Times Book Review*, July 14, 1946. By permission of the editor and author.

seem to be speaking directly to the reader, though often with greater candor than they could achieve unaided and sometimes with more self-revelation than they intend.

The successful use of this method depends on what Mr. van Gelder calls "a kind of movie memory that plays back the scene for you when you are at your typewriter." And it has to be done fast:

If you work slowly and hard over a profile you are all too apt to go creative and try to build up this or that idea of a person. That is, the interviewer becomes concerned with points that he wants to make and is apt to ever so slightly falsify some aspect of his subject—for example, by leaving out a couple of untidy facts that seem to have no place in his scheme for the effect that the interview is to produce. But if you draw the sketch at high speed, just putting down everything that seems interesting, the untidy facts get in and modify the portrait as they should, and the picture is free hand, it is individual.

Since one of the things writers like most to talk about is their own writing habits, this volume could serve as a guidebook for other writers. It contains dozens of devices by which inertia can be cheated and a writer can outstare the awful blankness of an empty page. (One method, which seems to be growing in popularity, is to dodge paper and typewriter altogether, and dictate your book.) But if there is a single lesson to be drawn from these varied experiences it is that if a man really wants to write he will find his own way of doing it. Some of these hundred-odd writers work all day long; some find that two or three hours is the span of their productive period. Some write in longhand, many type, some dictate. For many the early morning is the best writing time, others like the middle of the night. Some cannot work in the city, others cannot work in the disturbing quiet of the country. Robert Nathan puts it this way:

When I try to make myself a vacuum center I can't write at all. The country, where there is so little to do, I find most difficult as a place to write. Here in New York, where so much is going on all the time, it is possible to work at high pressure, to give, on occasion, all one's time to work and not feel that one is missing anything. In the country I grasp at every activity that offers.

Hervey Allen, on the other hand, commenting on life in Florida, has this to say:

The mind makes its own time, keeps to its own schedule. I doubt that nervous bustle can help a novelist in the least, whatever it may do for a journalist. The great necessity when working on a novel—once the fundamental of having something to say is taken care of—is to have a wife who knows that when you are not actually writing it is not because for some selfish reason you don't want to or are

being lazy, and who knows that if you get up and walk away or are moody at meals you are not mad or hurt, that nothing is wrong with you except that your mind is on its job and that that job is important.

Among this large group there are writers who seem to have organized their lives and labors with frictionless perfection. There are others who, from the outside at least, appear completely disorganized. Some write slowly, some fast; some with anguish, others with delight. There are not a few who would be willing to echo Conrad's comment about his craft: *métier d'un chien*. But they have this in common: each has been touched in some measure by the magic of the creative spirit. And for this reason there is a special interest in their manner of working and their struggles. These men and women have something to say, not necessarily a "message," but an attitude, a point of view, something peculiarly their own and unlike anyone else's attitude or point of view. For the satisfaction of the individual writer the significance of what he has to say seems far less important than its uniqueness. To the degree in which he is successful in expressing his individual value he is happy and content with his work.

It is not altogether surprising that some of the most prosperous writers have been the least successful in this important respect. Their discontent rumbles beneath their glib talk in several of these interviews. Some have missed their pitch, have tried for too high a note or, more often, one not high enough.

But these all are or have been successful practitioners of their craft; many of them are artists. What of the writers who fail, and the writers who never write at all? Mr. van Gelder glances at them in his introduction. The man, inspired by some dream of impossible perfection, who spent his life preparing to write. The man in frantic search of perfect surroundings, who never found a place where he could comfortably lift a pen. And the unhappier man whose preoccupation with "what the public wants" brought him to success and then eclipse. "When all that the public wants," says Mr. van Gelder, "is the best that some whole man, who is no more than normally concerned with pleasing, can do well enough to satisfy himself."

Unhappily, the quality of wholeness, of independence and self-reliance, seems to be as rare among writers as among the rest of us. It is perhaps for this reason that the figure of Theodore Dreiser bulks so large in the present book. Mr. van Gelder begins his Notes on the Literary Life, which forms the introduction, by discussing Dreiser. "[He] seems to me to have been an embodiment, not necessarily pleasing, of the traits that a man needs to hold himself together through a long career as a creative writer." A little later he describes Dreiser at a party:

He was not afraid of being the object of either boredom or distaste. He hoped to entertain and interest, but he had no slightest idea of losing himself for one minute in making that effort. Probably he felt that same way when he wrote.

And to this he adds: "The central fact about him, I decided, was that he was peculiarly able to be himself without shutting himself off from others."

Oddly enough, few of these writers talk about their professions as a way of enlarging man's horizon, as an exploration of the unknown. One conspicuous exception is James T. Farrell:

A serious writer struggles for a way of seeing life, for a perspective, for making a greater conquest of experience, of human beings.

By conquests I mean real attempts to penetrate the mysteries of life. We are surrounded on all sides by mysteries. There are many in our own consciousness—we do not know our own beings. All serious writers unravel mysteries, creating a sense of what these mysteries mean.

The serious implications of this book are nicely balanced by its entertainment value. Mr. van Gelder's movie memory records appearance and gesture as well as idea and turn of phrase. This assorted company, domestic and foreign, has its clowns as well as its wise men—and some unintentional clowns and inadvertent wise men. After meeting them in these pages it would be hard to deny that writers are good company.

At the close of his introduction Mr. van Gelder speculates about the effect more money may have on the writers of books. Will it do to them what magazine money and movie money have done to the writers in those fields? Will it turn them into tame hacks?

This fear seems groundless. Money there has been in certain books for many years. It has been made by good writers and bad. It has corrupted not a few and may be expected to do so again. But, as Mr. van Gelder says, "books have supplied the range for a free company, adventurous and intelligently exploratory, reasonably sure, reasonably kind, warmly optimistic." There is no reason this reviewer can think of to believe this will ever change.

These interviews span the past six years, beginning with H. L. Mencken in 1940, and ending with Erich Maria Remarque early in 1946. Included are such varied craftsmen as Pearl Buck, Saroyan and Caldwell; Katherine Anne Porter, Thurber, Thomas Mann and John O'Hara; Jesse Stuart and James Warner Bellah; Allan Nevins, Sinclair Lewis and Sigrid Undset; Hemingway, Jan Struther, Nunnally Johnson and Thomas Wolfe; Joseph Hergeheimer and Maugham; Kay Boyle and H. Allen Smith; Irvin Cobb and John Dos Passos; Eudora Welty and Carl Sandburg; Katharine Brush and Lloyd C. Douglas; Nancy Hale and Bernard De Voto; three writing ser-

geants and Edna Ferber; Carlos P. Romulo and Christopher Morley. All of these and more, with their variety and scope, form a living picture of the literary world during a critical time. Directly or indirectly, the impact of world events has shaken all these people. The spirit in which the shock was met is as various as their individual work. Some were unable to meet it.

LEE'S LIEUTENANTS, A STUDY IN COMMAND¹

[Vol. III. By DOUGLAS SOUTHALE FREEMAN. New York: Charles Scribner's Sons. 1944.]

David M. Potter

THE appearance of the third and final volume of "Lee's Lieutenants" marks the completion of a great and long-extended historical enterprise. In 1915, Douglas S. Freeman brought out a volume of Lee's dispatches, and in the same year he agreed, at the request of Charles Scribner's Sons, to write a one-volume life of the Confederate commander. At that time, the last of Lee's lieutenants still survived as living men, and in the United States allusions to "the war" were more likely to indicate the American war of Lee and Grant than the new trans-Atlantic conflict of Foch, Joffre, and Douglas Haig.

The projected biography of 1915 grew from one volume to four before it finally appeared in 1934, when it was immediately and universally recognized as a major contribution to military history and a supremely effective delineation of a great man. Amid the applause of the critics, perhaps the only person not entirely satisfied was Mr. Freeman himself, who felt "plagued and pursued" by a misgiving: in holding his focus upon Lee, had he perhaps placed excellent subordinates "in undeserved shadow"? Would not Lee have regretted any exaltation of his fame which might minimize, even by silence, the services of his comrades in arms? For these doubts there was but one corrective, namely, the preparation of a parallel history in which the focus should be directed upon the entire high command of the Army of Northern Virginia. This involved problems of repetition, but these problems have been solved with rare dexterity, and now a two-thousand-page study of the general officers who fought under Lee takes its place beside the equally thorough biography of the great commander. Thirty years after the inception of the

¹From *The Yale Review*, Winter 1945. Copyright Yale University Press. Used by permission.

work the project is complete. No other American army has been accorded a comparable literary monument.

In the generation between "Lee's Dispatches" and "Lee's Lieutenants," the American Civil War passed from the memory of living men. During that generation, Mr. Freeman, more than anyone else, has applied historical canons to prominent war leaders, and has very nearly fixed the final places which they must take in the record of history. The dispassionate exactness of his evaluations does not manifest itself at once, for he writes of "that company of gallant gentlemen," the Confederate military leaders, with candid devotion. But if, as someone remarked, all the adjectives fight on the side of the South, it must be added that the judgments do not. No man who wrote three additional volumes to avoid a disproportionate glorification of Lee would give indiscriminate praise to other generals, and one of the great merits of the work is its searching and detached appraisal. No one's deficiencies, not even Lee's, are disregarded or even minimized. On some of the generals, as for instance, in the present volume, Beauregard and Pickett, the conclusions are as damning as one would expect from any "debunking" biographer, though the feeling is always one of regret rather than of mockery. Freeman may be cited as a classic proof of the fact that devotion need not entail partiality and that detachment does not necessarily imply indifference.

A significant aspect of Mr. Freeman's strong historical perspective is his constant awareness that the Confederacy was defeated, and that history must explain the defeat. Most of our military history, dealing principally with strategy and maneuver, in which the South usually held the advantage, has strangely failed to make this explanation. But Freeman suggested a new theme on the first page of his life of Lee, in 1934, when he remarked upon the perplexities that Lee confronted "in the perennial reorganization of an army that suffered ceaselessly from attrition." It had long been a truism that attrition was more basic than maneuver in the downfall of the Confederacy, yet Freeman's present work, a three-volume elaboration of the phrase of 1934, is almost the first detailed analysis of the impact of this factor upon a Southern army. This analysis, which reaches its culmination in the present volume, is not always diverting reading, and it is too elaborate even to be indicated here, but it is the heart of the entire study. For that reason, Mr. Freeman merits distinction not only for the widely recognized fact that he has written the finest exposition of the greatness of the Army of Northern Virginia but also because he has provided the clearest explanation of its failure.

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JOSEPH ADDISON (1672-1719) is famous for his editorship, with Richard Steele, of the *Tatler* and the *Spectator*. Courthope, his biographer, declared him to be "the chief architect of Public Opinion in the eighteenth century." In many of his informal essays he treats with kindly humor the follies and affectations of his day in a style which Samuel Johnson declared to be "familiar but not coarse, and elegant but not ostentatious."

HERBERT AGAR (1897-) was born at New Rochelle, New York, and was graduated from Columbia. Continuing his studies, he earned the M.A. and Ph.D. degrees at Princeton. He served for many years as a foreign correspondent, returning to become editor of the *Louisville Courier-Journal* in 1940. In 1933 he won the Pulitzer prize for American history.

FRANCIS BACON (1561-1626) became Lord Chancellor of England in the reign of James I. He was deeply interested in scientific and philosophic studies and championed the experimental attitude toward knowledge. His place in English literature is secure by virtue of his authorship of the *Essays*, which are condensed and pithy comments upon life and the ways of adjusting oneself to a practical world.

THOMAS CARLYLE (1795-1881) was an eloquent spokesman against the spiritual torpor of his day. With intense moral indignation he attacked whatever he considered weak and false in social institutions. The idea of leadership by the best minds is inherent in all his work, and he declared the history of the world to be "but the Biography of greatness." In *Latter-Day Pamphlets* he gives expression to his political dogma of "government by the best" instead of "government by the worst" which he held democracy to be.

SAMUEL LANGHORNE CLEMENS (1835-1910), who wrote under the nom de plume Mark Twain, is one of the great comic storytellers of America. Many of his books, such as *Life on the Mississippi*, *Roughing It*, *Innocents Abroad*, *The Gilded Age*, and *A Connecticut Yankee in King Arthur's Court* expose with penetrating wit the foibles of human nature and the fallibility of American institutions. *Tom Sawyer* and *Huckleberry Finn* depict the kind of life Twain knew as a boy. In *Mark Twain's Autobiography*, not published until fourteen years after his death, are to be found the same buoyant spirit and keen observation on the ways of the world which characterize his other work.

JOSEPH CONRAD (1857-1924) was born in Russian Poland but became a British subject in 1884. He held a master mariner's license and for ten years was in command of English vessels at sea. He rapidly mastered the English

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language so well that his tales of the sea, with their penetrating analysis of character, became classics in English fiction.

EVE CURIE (1904-) is the daughter of Madame Marie Curie, the famous scientist. Her biography *Madame Curie*, translated by Vincent Sheean, won instant recognition for its warm human and literary qualities. Eve Curie wrote regularly for Parisian journals on music, the theater, and motion pictures. She is an accomplished linguist and a music critic of some renown.

BERTHA LOUISE (CLARK) DAMON was born in the Connecticut village she calls North Stonefield. She graduated from college in New England but later moved to California, where she has spent about half her life. Although she had no formal training in architecture, Mrs. Damon became a successful builder of houses.

BASIL DAVENPORT (1905-), a graduate of Yale and Oxford, is editor with the Book of the Month Club and author of a translation of *L'Aiglon*, by Edmond Rostand.

VERA MICHELES DEAN (1903-) was born in Petrograd, Russia. She was graduated from Radcliffe and holds the Ph.D. degree from Yale. She came to the United States in 1919 and was naturalized in 1928. She has been connected with the staff of the Foreign Policy Association since 1931, serving as research director and editor since 1938.

JOHN DEWEY (1859-) is a native of Burlington, Vermont. He graduated from the University of Vermont and took his Ph.D. degree at Johns Hopkins. He has taught at the University of Michigan, the University of Minnesota, the University of Chicago, and at Columbia, where he has been professor of philosophy since 1904. He is one of America's most distinguished philosophers.

ROBERT L. DUFFUS (1888-), author of many books and magazine articles on a variety of subjects, is also a regular contributor to the *New York Times*. Two of his books are *Democracy Enters College* and *Night Between the Rivers*.

WILL DURANT (1885-) was born in North Adams, Massachusetts. He studied at St. Peter's College and obtained a Ph.D. degree at Columbia University. He taught at Columbia and at the University of California at Los Angeles. He is the author of numerous books on philosophy.

A. S. EDDINGTON (1882-1944) was born at Kendal, England, and was educated at Oxford. From 1906 to 1913 he was chief assistant at the Royal Observatory at Greenwich and in 1913 became professor of astronomy at Cambridge. The following year he was made director of the Cambridge

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observatory. He was knighted in 1930. Sir Arthur's principal researches were on the motions of stars, stellar evolution, and relativity.

ALBERT EINSTEIN (1879-), a physicist, was born in Württemberg, Germany, of Jewish parents. He became a professor of mathematics and physics at Zürich and at Prague, and in 1913 was made director of the Kaiser-Wilhelm Physical Institute in Berlin. He won the Nobel Prize in 1921. Many honorary degrees and medals have been conferred upon him in recognition of his theory of relativity. Deprived by Hitler of his post in Berlin, Einstein became professor of mathematics at the Institute for Advanced Study at Princeton, New Jersey.

CLIFTON FADIMAN (1904-), a native of New York, graduated from Columbia in 1925, taught English at the Ethical Culture High School in New York for two years, and contributed to various newspapers and magazines. In 1929 he became editor with Simon and Schuster, holding this post until 1935. From 1933 to 1943 he was book editor of *The New Yorker* and from 1938 he was even more widely known as master of ceremonies of the "Information Please" radio program.

CHARLES FERGUSON (1863-) was a minister, an editorial writer, a special representative of the government abroad, and an agent of the state department in the Far East. At the time of writing "Art For Our Sake," Mr. Ferguson was a member of the editorial department of the *Reader's Digest*.

HARRY EMERSON FOSDICK (1878-) was born at Buffalo, New York. He graduated from Colgate and Union Theological Seminary and was ordained in the Baptist ministry in 1903. Since 1915 he has been professor of practical theology at Union Theological Seminary. He was long pastor of the Riverside Church in New York.

BENJAMIN FRANKLIN (1706-1790) is generally considered the most remarkable American of his time. He was a successful printer and publisher, a shrewd businessman, an inventor, the founder of a library, a journal, a university. His studies of electricity gave him honors from France and England, and the universities of Harvard, Yale, Edinburgh, and Oxford granted him honorary degrees. He spent eighteen years in England as an agent of America, and in the Revolutionary War he was sent to France to secure aid for America. His *Autobiography* and *Poor Richard's Almanac* are his two best-known literary works. *Poor Richard's Almanac*, published as a pamphlet every autumn for twenty-five years, was extremely popular for its shrewd, practical advice upon how to become rich and respected. The sayings of Richard were put in the form of proverbs.

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PAUL GALICO (1897-) was born in New York City and is a graduate of Columbia University. From 1924 to 1936 Mr. Galico was a sports writer and columnist; since 1936 he has been a free-lance fiction writer. His work has appeared in many of the leading American magazines.

CHARLES L. GLICKSBERG (1901-) holds the Ph.D. degree from the University of Pennsylvania. He is the author of a thesis on Walt Whitman and has written numerous articles on the teaching of literature.

ALEXANDER HAMILTON (1757-1804) was born in the British colony of Nevis, one of the Leeward Islands. He entered Columbia University in 1774, but the preliminaries of the Revolution interrupted his college work and gave him opportunities for distinction which he willingly seized. With Washington and Jefferson, he is probably the best-known figure of our early history, climaxing his career as Secretary of the Treasury of the new republic. He was killed in a duel with Aaron Burr.

CHARLES HOMER HASKINS (1870-1937) graduated from the Johns Hopkins University at the age of seventeen and received the Ph.D. degree at twenty. From 1890 to 1902 he was professor of European history in the University of Wisconsin. In 1902 he became Gurney professor of history at Harvard, and from 1908 to 1924, was dean of the Harvard Graduate School.

JOHN HOLMES (1904-) is a poet and critic, assistant professor of English at Tufts College, and was poetry critic for the *Boston Evening Transcript*. His first volume of poems, *Address to the Living*, was published in 1937. A collection of essays and illustrative quotations, entitled *The Poet's Work*, appeared in 1939.

THOMAS HENRY HUXLEY (1825-1895) was professor of natural history in the Royal School of Mines from 1854 to 1885. After the publication of *The Origin of Species* by Darwin in 1859, Huxley became an outstanding defender of evolution. He is best known as a writer and lecturer in the field of biology and paleontology and in the subjects of education, religion, and government as they are affected by scientific development.

WILLIAM JAMES (1842-1910) was born in New York City and after extensive study in American and European schools decided on the field of medicine. He obtained his medical degree at Harvard in 1868. Ill health prevented his practicing, and he turned to the teaching of physiology. His interest in physiology and psychology led to his transfer to the department of philosophy, where he found his real interests lay. He became the most distinguished American philosopher and psychologist of his time.

THOMAS JEFFERSON (1743-1826), third president of the United States, was born at Shadwell, in Goochland (now Albemarle) County, Virginia. Like

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Franklin, Jefferson's accomplishments are so varied and so distinguished that they are bewildering. Statesman, author, diplomat, scientist, architect, apostle of freedom and enlightenment, he played a decisive role in the framing of our government.

HOWARD MUMFORD JONES (1892-) , a native of Saginaw, Michigan, graduated from the University of Wisconsin. He taught at the University of Texas 1919-1925, at the University of North Carolina 1927-1930, and at the University of Michigan from 1930 to 1936. From 1936 he has been a professor of English at Harvard. He is the author of poems and plays as well as of numerous scholarly works.

WALDEMAR KAEMPFERT (1877-) is a native of New York City. He was graduated from the College of the City of New York and New York University and was admitted to the New York bar in 1903. He registered as a patent attorney, later became in turn managing editor of the *Scientific American*, editor of *Popular Science Monthly*, and science editor of the *New York Times*. He has remained with the *Times* since 1931.

GRANT C. KNIGHT (1893-) is a native of Williamsport, Pennsylvania. Receiving an A.B. from Albright College, and an A.M. from Gettysburg College, he has been a member of the English department of the University of Kentucky since 1921. He is the author of critical books on English and American literature and culture.

CHARLES LAMB (1775-1834) was employed as a clerk in the East India House until his retirement at the age of fifty. He spent his leisure time in writing, his *Essays of Elia* giving him a place as one of the most beloved of English essayists. One critic said of him, "There is more imagination to the square inch in Lamb's writing than in almost any other modern prose."

IRVING LANGMUIR (1881-) was born in Brooklyn, New York. He is a graduate of the Columbia School of Mines and holds a Ph.D. degree from Göttingen, Germany. He began his career as an instructor in chemistry at Stevens Institute, and has been on the staff of the General Electric Research Laboratory at Schenectady, New York, since 1909. He is now associate director.

HAROLD J. LASKI (1893-) , professor of political science in the University of London, has been a frequent lecturer at Yale and Harvard. He has an international reputation in his field, is the author of many books, and is a frequent contributor to the *New Republic*, *Nation*, and *Manchester Guardian*.

WALTER LIPPMANN (1889-) was born in New York City and is a graduate of Harvard. He served as a captain in the First World War, and later rose to the editorship of the *New York World*. Since 1931 he has been

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a special writer for the New York *Herald-Tribune* and other newspapers. He is the author of many books and articles.

ARCHIBALD MACLEISH (1892-) was born at Glencoe, Illinois. He took his A.B. degree at Yale. He is one of America's most distinguished poets. From 1939 to 1944 he was Librarian of Congress. He served as assistant Secretary of State 1944-1945.

DONALD MOFFAT (1894-) was born at St. Huberts, New York. A Harvard graduate, he wrote the "Mr. Pennyfeather" series of articles which appeared in the *Atlantic Monthly* in 1936 and 1937.

SIR THOMAS MORE (1478-1535) was Lord Chancellor of England under Henry the Eighth, but was indicted for high treason and beheaded when he opposed the king's defiance of the papacy. In *Utopia* More gives an account of an imaginary land beyond the sea called Utopia (Nowhere), where poverty and injustice have been abolished.

JOHN HENRY NEWMAN (1801-1890) was a graduate of Oxford University and a fellow at Oriel College. For many years a clergyman in the Anglican church, he played an important part in the Oxford Movement, but became a member of the Catholic church in 1845 and served for four years as rector of the Catholic university at Dublin. While rector of the university, he delivered a series of lectures in defense of liberal education which was later published in *Idea of a University*. He was created a cardinal in 1879.

JOHNSON O'CONNOR (1891-) organized the Human Engineering Laboratory at the Stevens Institute of Technology and from 1930 was director of psychological studies at the Stevens Institute; he has been assistant professor of psychology at the Massachusetts Institute of Technology. He is the author of numerous articles describing measurable occupational characteristics.

THOMAS PAINE (1737-1809) was born in Norfolk, England, of a Quaker family. He supplemented a meager grammar-school education by attending science lectures. Encouraged by Benjamin Franklin, he came to America in November, 1774. In January, 1776, he published *Common Sense*, a remarkable republican pamphlet. George Washington said that it "worked a powerful change in the minds of many men." At the outbreak of the Revolutionary War, Paine served as volunteer aide-de-camp to General Greene. It was while serving in this capacity that he wrote the papers called *The Crisis*. The great service which he did through these papers for the American cause was recognized by various appointments to office and gifts of money from Congress. In 1787 Paine left America for Europe and interested himself in the cause of the French Revolution. He became a member of the French Assembly but,

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incurring the enmity of Robespierre, narrowly escaped death on the guillotine. On his release from prison he returned to America and died in New York City.

BLISS PERRY (1860-) graduated from Williams in 1881 and studied at Berlin and Strassburg. He taught first at Williams and later at Princeton. In 1899 he became editor of the *Atlantic Monthly*, a position which he held for the next ten years. In 1907 he accepted a professorship of English literature at Harvard, retiring in 1930. He was general editor of the Cambridge Edition of the Poets and the author of many scholarly studies.

DAVID M. POTTER is a graduate of the University of Mississippi and holds the M.A. degree from Yale. He is the author of various books and reviews on the United States South.

JOHN RUSKIN (1819-1900), professor of fine arts at Oxford for many years, was considered the foremost art critic of his day. He believed that art reflected social conditions and that all human work depended "for its beauty on the happy life of the workmen." As a result he became active in various schemes of reform, being one of the first to advocate old-age pensions, better housing for workmen, and aid for the unemployed.

BERTRAND RUSSELL (1872-) was born in England, where he is identified with liberal thought. Widely known as a mathematician, philosopher, and critic of modern social institutions, at one time he was a lecturer at Trinity College, Cambridge. During the First World War he was imprisoned for a time because of his pacifist activities. Some of his best-known works are *Why Men Fight*, *Mysticism and Logic*, *What I Believe*, *Religion and Science*, and *Power*.

GEORGE SANTAYANA (1863-), an American poet and philosopher, was born in Spain and educated at Harvard, where for some years he was a professor of philosophy. After 1912 he lived chiefly in England and Italy. His first essay, "The Sense of Beauty," brought him fame in the field of aesthetics, and from that time he became widely known as a philosopher and man of letters. Typical works are *The Life of Reason*, *Character and Opinion in the United States*, *Scepticism and Animal Faith*, and *The Last Puritan*.

SAMUEL H. SCUDDER (1837-1911) studied at Williams and at Harvard. In 1864 he was appointed custodian of the Boston Society of Natural History and in 1880 was chosen president of that organization. From 1886 to 1892 he served as paleontologist on the United States Geographic Survey. He was the author of numerous scientific studies on the fossils of North America.

WILLIAM SEABROOK (1886-), a reporter, feature writer, and free-lance writer, was also an extensive traveler, having spent considerable time in

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Arabia, Tripoli, Kurdistan, Haiti, and West Africa. Among his books are *Jungle Ways*, *Asylum*, and *These Foreigners*.

ROBERT LOUIS STEVENSON (1850-1894) was born in Edinburgh and studied engineering and law at the University of Edinburgh. He was admitted to the bar but never practiced law. He is best known as a short-story writer, essayist, and novelist.

JONATHAN SWIFT (1667-1745) was the author of many satirical works which exposed the evils of his day. *Gulliver's Travels*, first published in 1726, is an attack upon the follies of mankind and the imperfections of social institutions and government. In "A Voyage to Brobdingnag" (part two of *Gulliver's Travels*), Gulliver visits a land of giants and in conversation with their king he describes conditions in his own country, England. By depicting the amazement of the king when he hears Gulliver's account of the land from which he has come, Swift delivers a telling satire upon the conditions of government in England. In the fourth voyage Gulliver visits the Land of the Houyhnhnms, the name Swift uses for the intelligent and superior horses who are the ruling animals.

DEEMS TAYLOR (1885-) was born in New York City and was graduated from New York University. He has served as correspondent, critic, and commentator, is the composer of both light and serious music, and is perhaps best known to the general public as a commentator and narrator on numerous radio programs.

ORDWAY TEAD (1891-) is a native of Somerville, Massachusetts, and graduated from Amherst. He has served as editor of economic books for Harper & Brothers, as director of business publications for McGraw-Hill Book Company, and as a member of various industrial boards and committees.

JAMES THURBER (1894-) attended Ohio State University. In 1918 he was employed as code clerk in the State Department, serving in the Paris Embassy until 1920. After that he engaged in journalism. He was a reporter on the *Columbus Dispatch*, the Paris edition of the *Chicago Tribune*, and the *New York Evening Post*. In 1926 he joined the staff of *The New Yorker* magazine. After leaving the staff of *The New Yorker* he was still a frequent contributor.

MARK TWAIN. See SAMUEL LANGHORNE CLEMENS.

LOUIS UNTERMAYER (1885-) resigned from his family's business house in 1923 to devote all his time to study and writing. From 1934 to 1937 he was poetry editor of the *American Mercury*. The author of poems, parodies, and fiction, he is best known perhaps for his excellent essays on American poetry and poets since 1900.

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ALFRED NORTH WHITEHEAD (1861-) was born at Ramsgate, England, and was educated at Trinity College, Cambridge, where he earned three degrees. He taught at Trinity and the University of London, and became a professor of philosophy at Harvard University in 1924. He is among the most distinguished living philosophers and mathematicians.

PHILIP N. YOUTZ (1895-), assistant director of the Brooklyn Museum, was at one time instructor in architecture at Teachers College, Columbia, and instructor in philosophy at Columbia. He served for some years as supervisor of adult education and art courses at the Peoples Institute of New York. From 1936 to 1938 he was president of the American Federation of Arts.

STEFAN ZWEIG (1880-), a Viennese author of Jewish parentage, moved to London, where he writes fiction and biography. Among his works are *The Buried Candelabrum* and *Conqueror of the Seas: The Story of Magellan*.

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THOMAS HENRY HUXLEY · AUTOBIOGRAPHY

Do you think the first three paragraphs are rather self-conscious? Do you think this sketch would be more effective if it began with the sentence, "I was born about eight o'clock . . ." Or do you think that this introduction lends emphasis to the sincerity of Huxley's closing words? Look over the facts of his life which Huxley thought worth noting. What do they tell you about this man? Huxley took up the post of paleontologist and lecturer on natural history with the intention of giving it up as soon as he could get a physiological post, but he held the office for thirty-one years. This is a common enough situation in the lives of many men, but does Huxley reveal specific reasons for his own case? To get clearly in mind at the outset the advantages which autobiography has over the work of the biographer, you may wish to compare this short autobiography with a biographic sketch of Huxley in some good encyclopedia. What are the essential differences between the two types of writing? What faults and virtues of autobiography can you pick out of this essay?

Suggestions for Themes

"The Objects I Have Had More or Less Definitely in View." "It Was Good for Me to Live under Sharp Discipline." "Living on Bare Necessaries." "I Disliked Public Speaking." Choose some other phrase or sentence from Huxley's sketch and use it as the topic for a short autobiographical theme.

MARK TWAIN · EARLY DAYS

Try to discover the literary tricks by which Mark Twain gets his humorous effects. Note how frequently Mark Twain amuses and delights by the unexpected use of a single word. Underline a few words, not in humorous context, whose use you consider particularly effective. Try to find and to use such precisely "right" words in your own prose; it is well worth your trouble. Throughout your study of the essays in this volume, be on the lookout for words and for ways of saying things which please you—and mark them when you find them. You will teach yourself a good deal about the ways to achieve effective writing. Make a rough outline of Mark Twain's chapter for the purpose of discovering exactly how the various elements are put together,—narration, description, comments, exposition. How does emphasis upon his environment add to the effectiveness of the autobiography? Look sharply at Mark Twain's use of small detail.

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Suggestions for Themes

Literary Tricks to Achieve Humor. Mark Twain and Bob Hope. "It Was a Heavenly Place for a Boy [or Girl]." My Favorite Humorist. Youth Is Always Romantic in Retrospect. On Favorite Dishes. In a letter to one of your close friends, tell some of the earliest experiences of your life which you remember most vividly. In a conversation with an acquaintance, tell about a prank which you remember with pleasure or regret.

BLISS PERRY · THESE CRUDE YOUNG MEN

Do you agree that "half the advantage of going to college lies in going away to college"? If you are now attending school near home, what advantages, besides economy, do you enjoy? Do you think that the broadening and liberalizing of the curriculum during the last fifty years is entirely desirable? If you have time, try to find in your main library a catalogue of the courses offered at your school some years ago. Do students in your college today form their "own social groups with entire freedom"? Think over the organization of athletics in Perry's time, and contrast it with your own experience in sports. What do you consider the really serious problems resulting from the postwar crowding of most colleges? Within your own experience has the best teaching actually been done "in courses that do not catch the public eye"? What do you think are the main points Perry is trying to make in this essay?

Suggestions for Themes

For the benefit of someone you knew last year, write a short essay characterizing college life as you find it today; use the first part of Perry's own outline for presenting his material if it will help you. Experiences in Disagreeing with the Teacher. Today's "Crude Young Men." If you have found some old catalogues, write an account of the curriculum of your own college ---- years ago. Have a chat with some oldtime employee of your college (janitors are best) and write a theme about your conversation.

BERTHA DAMON · SEA CHANGE

Without rereading the sketch, what details of summer life at the seashore can you recall? The details which made an impression on you as a reader may give you hints on selecting vivid material for your own autobiography. Glance over this piece as a whole until you discover what device gives it structural unity. As you read about Grandma, did you find yourself reminded of some person in your own acquaintance? You may find it profitable to compare Miss Damon's and Mark Twain's use of exaggeration. Are the incidents of Grandma's daily dip and

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her battle with Great-Aunt Charity included simply because the author thought they would be amusing to the reader, or are they fundamental material in the development of the character study of Grandma? As a student of writing, compare the use which has been made in these autobiographies of sharp, small detail, and of specific incidents to make a point.

Suggestions for Themes

Look up some old magazines in the college library and write an account of either the advertisements or the styles portrayed in the story illustrations. Write a description of life at a summer camp you know. "Accessories Are Important." My Own Encounters with Maiden Aunts. My Grandmother. Rummaging in Our Attic.

PAUL GALLICO · THE FEEL

The introductory paragraphs of this essay are effective and serve a specific purpose. Jot down what you think is the purpose of the first four paragraphs, and the reason for the order in which each is presented. If you find this study of structure helpful to your own problems as a writer of themes, continue to make jottings for a few pages of this essay. The body of the essay contains a series of accounts which are all similar in the point the author makes. Why is this series not monotonous? Pick out the experience which you liked best as you first read the selection and try to analyze the reasons for your choice. Look over the introductory sentences to each new incident and notice the variety and flexibility of the author's presentation. What do you think is the strongest single feature of this piece of prose?

Suggestions for Themes

"'It Don't Feel Like Nuttin'.'" Some Tight Spots of My Own. Write on some experiences of your own which were less painful than Mr. Gallico's, perhaps, but equally illuminating. The Game I Consider the Most Difficult and Precise. Describe the incident in which you first got "the feel" of some sport.

SAMUEL H. SCUDDER · IN THE LABORATORY WITH AGASSIZ

What is the basic reason for the use of some autobiography in this biographic sketch of Louis Agassiz? Have you ever known a teacher who used Agassiz's methods? What do you think of them? What would be your reaction if you had been in young Scudder's place? Have you on your own initiative ever looked at some object really carefully? What are the central character traits of Professor Agassiz which emerge from this sketch? As you read, did you look up "haemu-

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lons" in your dictionary to see what they were like? If not, did you really miss the point of the whole sketch? Do you think famous teachers today should spend part of their time instructing beginners, or do you think they should reserve all their time for advanced students? Weigh the problem carefully.

Suggestions for Themes

An Incident in Which I Discovered the Importance of Small Details. Scudder's First Day in the Laboratory Compared with Mine. Describe the incident through which some teacher has made a lasting impression on you. The Career of Louis Agassiz. Details about My Room I Had Never Noticed. Take any coin (a Lincoln penny, for example). Imagine yourself an archeologist of the distant future. How much about our present civilization can you deduce simply from a careful study of this coin?

STEFAN ZWEIG · TOSCANINI

Do you think perfection is attainable? Do you believe achievements come easily to the genius, or do you think the greater genius a man possesses the harder he must work to attain his desired end? How do you interpret Zweig's statement that Toscanini's work is "ethical as well as artistic"? What is your opinion of Zweig's portrait of the conductor? Do you think Zweig sacrifices detail for a single effect? Do you think his approach to his subject is sufficiently detached?

Suggestions for Themes

After consulting some short articles in the reference room of your library, write your own account of the development of the symphony orchestra. Write a sketch of a person you know who, like Toscanini, seems to possess "electrical energy." In an imaginary conversation with someone, characterize the conductor whom you most admire. On Listening to Music Out of Doors. I Visited a Broadcasting Studio. Choosing a Record Collection. Overseas Broadcasts.

EVE CURIE · FORTY RUBLES A MONTH

Do you think you would be willing to suffer the hardships Madame Curie endured for the sake of education? Do you think the poor student today has as many trials and privations as the poor student of forty or fifty years ago? If Madame Curie had made no important discovery nor attained any prominence in the field of science, do you think her laborious, studious life would have been wasted? In your opinion, is Eve Curie's emphasis upon the great scientist's enthusiasm, hope, and perseverance during her hardships too strong for the picture to remain convincing? Do you think this portrait is biased by the fact it was written by the scientist's daughter? Or do you think it is remarkably objective?

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Suggestions for Themes

On Being Broke. Uses of Radium. Later Discoveries Based on Madame Curie's Work. Write a sketch of a scientist you know. If you can find some old letters, write a biographic sketch based on them, using your imagination to fill in the details. Describe the circumstances of an incident when you suffered intensely from the cold. How I Am Working My Way through College.

JAMES THURBER · E. B. W.

Humorists are frequently penetrating biographers. Why do you think this should be so? How large a part do anecdotes play in this sketch? Do you get a clearly focused picture of Mr. White? Study the economy of expression in the relation of some incident. Is there anything which could be left out? Why is the material presented in the order in which it is? Do you enjoy Thurber's nonsense? Try imitating his methods to see how he achieves his effects. Do you see how fine a border line there is between genuine humor and a heavy-handed attempt to be smart? Examine Thurber's use of parenthesis, parallel structure, and lists. What use does he make of the element of surprise? Why should informal biography of this type be worth your careful study?

Suggestions for Themes

The Difference between "It's Her" and "It Is She." Using Thurber's biography as a general model of organization and of informal method, write a short biography of someone you know well. On the Virtues of Informality in Prose. My "Ordinary, Normal Childhood." Write a short biographical sketch of James Thurber. On Being Shy.

DONALD MOFFAT · 'MAGGIE' BRYAN

What are the advantages gained by breaking the material into numbered sections? Study the purpose behind the variety in paragraph length. Examine the author's methods of transition between paragraphs and between sections of this piece. Listen closely to a conversation between two people, noting voices, expressions, the details of the incident in which the conversation has its frame. As soon afterward as opportunity serves, try to record the dialogue. Compare what you have written with Moffat's conversations in this selection. Repeat the experiment until you think you have satisfactorily mastered his methods.

Suggestions for Themes

In a letter to someone at home, give an account of a conversation overheard on the campus. Using Moffat's account of the German class as a model, write an

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account of some class you attend. Write a biographical sketch of some athletic coach under whose direction you have played. Write a short biography of some member of your family.

THOMAS HENRY HUXLEY · SCIENCE AND CULTURE

Glance back over Huxley's autobiographical sketch in the first section of this volume. It will help you to fit the meaning and the purpose of the present piece into its proper place. While delivered for a specific occasion, Huxley's speech serves the larger issues for which he was crusading. Note, too, the carefully developed exposition, and Huxley's fairness of mind and balance of judgment. While science long ago won its rightful position in the forefront of college training, the struggle between science and the humanities for leadership continues. You can review Huxley's arguments from the vantage point of more than sixty years. Wherein do you, now, agree and disagree with him?

Suggestions for Themes

Changes I Think Huxley Would Make in My College Catalogue. On the Scientific Ignoramus. Mr. Huxley Comments on Science and Culture Today. The Scientific Tail Is Wagging the Academic Dog. Write an analysis of Huxley's speech, pointing out wherein you agree and disagree with him.

JOHN HENRY NEWMAN · KNOWLEDGE VIEWED IN RELATION TO PROFESSIONAL SKILL

Here the great English Cardinal makes one of his most eloquent pleas for well-rounded training in our colleges and universities. The point Newman is arguing is, of course, directly opposite to Huxley's thesis in the preceding selection. When the two pieces are examined together, each furnishes an enlightening commentary on the other. Since the literary style now in vogue no longer holds long, periodic sentences with careful internal balance to be in fashion, you may have been lost at first in Newman's stately periods. Did you find yourself charmed by the easy grace of his prose before you had finished the piece? Do you think that the reader gains something from the close attention which this periodic style demands?

Suggestions for Themes

Write a theme in three long paragraphs (but only three) explaining your idea of the three principal reasons for taking a well-rounded college course. Write an analysis of the arguments presented by Huxley and by Newman, pointing out which you think is the stronger in each case. Write a theme on what you regard the most important parts of a professional man's general education, imitating Newman's style for the training it will give your sense of balance in prose. The

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vast increase in professional knowledge in most subjects since Newman's time has made it even more difficult to divide wisely the time spent on specific and on general training. Write your own analysis of the problem.

PHILIP N. YOUTZ · EDUCATION FOR LIVING

In what way may a college be a "racket operating entirely within the law"? Do you think the program advocated by Youtz would achieve a greater unification of education? How does his plan solve the problem of overtraining a minority in athletics? The author points out that the aim of the college must be "students who are self-disciplined, not students who are faculty-disciplined." Explain the difference on the basis of your own experience. Do you agree that in a well-balanced education there should be no need of extracurricular activities? Point out what you consider would be the greatest benefits derived from the program Youtz proposes.

Suggestions for Themes

Write an essay contending that textbooks should be discarded. Use as many persuasive arguments as you can invent. Write an answer to Mr. Youtz defending present college-education methods, athletic departments, or any other part of college life you choose. Write an essay presenting your own ideas of a revised curriculum, giving some attention to the desirability of beginning the revision in the secondary schools. Write a letter to someone your own age discussing frankly the problems presented by the many demands made on your time by various interests in your college life.

CHARLES I. GLICKSBERG · LITERATURE AND SCIENCE: A STUDY IN CONFLICT

Do you think this selection is a balanced, objective presentation of the problem? Or do you think the author reveals a strong bias for one side? Did you weigh the source from which the article is reprinted? Do you think the author offers a real solution to the problem? What do you consider the most effective parts of this essay? Can you think of adequate rejoinders for any passages with which you disagree? Have you read any of the poetry of Robinson Jeffers or Archibald MacLeish or W. H. Auden? If reading modern scientific ideas of the universe presented as first-rate poetry appeals to you, ask your instructor to suggest a few titles of their poems to you.

Suggestions for Themes

After reading some contemporary poetry which makes use of modern science, write your own evaluation of Mr. Glicksberg's solution to the conflict. Write a short theme pointing out wherein you agree or disagree with Mr. Glicksberg's

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arguments. Try to start an argument among some of your college friends on the general subject of this essay, and report what you consider the most interesting parts of the discussion. Write a short essay on the conflicts you have discovered between various groups in your college.

TRAITS OF MIND

This brief selection is from the report of the Harvard Committee on the objectives of a general education in a free society. The thoughtful student may wish to read the entire report, which will certainly be available in the college library. This report has had—and is having—a very great influence on educational planning across the nation. Its subject is a matter of first importance to you as a student; the report happens, incidentally, to be exceedingly well written. You have now written several papers in college. On the basis of your own experiments in composition, what do you think are the strongest points about this piece of exposition?

Suggestions for Themes

Choose some course you had in high school, try to recollect all you can remember about it, and then write your own evaluation on what the aims of that course should have been. Assuming for the moment that the traits of mind here outlined are of greatest importance to you, examine the factors—home, friends, books, courses, sports, etc.—which have helped most to form your own traits of mind and write an account of this analysis.

ORDWAY TEAD · LEARNING FOR LIVING OR EARNING?

Do you think the author is warranted in dismissing the problem of vocational training in high schools by saying vocational training should not begin much before the age of eighteen? Do you think the author should have developed the points he lists in the fourth paragraph? Where does the "introduction" to this article end? Do you agree that the distinction between "vocational" and "cultural" education is an artificial one? How do you think a "conscious interrelation of general and special courses in the curriculum of each student" might be planned? Do you agree that "lucid expression, adequacy of communication" should be the aims of every course? The author makes broad recommendations in his conclusion. Do you think they can be realized? As a citizen immediately concerned with these suggestions, do you agree with all of them?

Suggestions for Themes

Write a frank analysis of the student-counseling system as you have experienced it. Write a theme presenting your own ideas on the problems of vocational

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and cultural training for high-school students who do not go to college. Learning by Working during Summer Vacations. Standards of Ethical Practice.

BENJAMIN FRANKLIN · THE WAY TO WEALTH

You no doubt read about *Poor Richard's Almanac* when you were in grammar school. Is this your first experience of reading it? How do you account for the enormous popularity this work enjoyed with our ancestors? Extensive use of capital letters and of italics was the printer's fashion of the time. Do you think it served a purpose? Franklin taught a few simple truths by repeating the same idea in many forms. Where do you find the same method used today? How do you account for the fact that many of Poor Richard's sayings are still current? Do you think popular adages reflect fairly accurately the life and interests of a community?

Suggestions for Themes

Slogans in Contemporary Advertising. Robbing My Dime Bank. How My Father Started in Business. Ask three different friends to tell you seriously what they would do if they inherited a certain sum of money, and characterize each person's reaction. Select some one of Poor Richard's sayings and use it as the subject for a theme.

THOMAS CARLYLE · HAPPY; LABOUR

Carlyle condemns the "Greatest-Happiness Principle" of mankind. How do you explain the term? Do you think it makes little difference whether we are happy or not, considering that "Today becomes Yesterday so fast," and "all Tomorrows become Yesterdays"? Carlyle believed there was "a perennial nobleness, and even sacredness, in Work." Do you think that there are types of work in which there is not a "perennial nobleness"? Do you think Carlyle is a realistic or an idealistic writer?

Suggestions for Themes

Write a sketch characterizing some person whom you believe to be genuinely happy. Write a theme explaining why you have chosen some occupation to be your life work. Write an account of your first experience in business. If you disagree with Carlyle, write a theme challenging his assertion that there is perennial nobleness in work.

WILLIAM SEABROOK · WHAT ARE YOU FIT FOR?

What is the real difference between vocational guidance and the attempt to give a "conscious inventory of natural aptitudes and potential capabilities"? What case history interested you most in this article? Do you think your own personality is objective or subjective? Do you think that scientific testing of the kind

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described in this article should be made available to everyone? How early in life do you think tests should begin? Do you think there are important imponderables in each individual's personality which make laboratory measurements of dubious value?

Suggestions for Themes

If you have experienced the feeling that "this thing has happened before," write an account of the incident. Write a theme challenging the value of aptitude tests. Write a theme explaining how aptitude tests have been of real use to you. Stop in at the office of some member of the Department of Psychology and ask him to explain the value and purpose of various aptitude tests given to college students. Write an account of the interview.

HAROLD J. LASKI · THE DECLINE OF THE PROFESSIONS

Why must we not judge a profession by its men of genius? Do you think Laski's criticisms of the bench and the bar are just? Does it seem to you that the professions are declining? Are you in favor of socialized medicine? To what factors do you attribute the opposition of the medical profession to socialized medicine? Do you think that if professions were organized as public services, competition would be eliminated? Do you think that competition in the professions is desirable? How does Carlyle's idea "We plead and speak, in our Parliaments and elsewhere, not as from the Soul, but from the Stomach" fit in with Laski's theme?

Suggestions for Themes

Pay a visit to the nearest police court and write an account of what you observe. Write a character sketch of a successful lawyer you know. Write a theme explaining why you agree (or disagree) with Laski's belief that the professions are declining. If you had experience with free medical treatment in the armed forces, write a theme explaining why your experience has led you to favor or disfavor socialized medicine.

JOHNSON O'CONNOR · VOCABULARY AND SUCCESS

O'Connor has shown the high correlation between vocabulary and success. Do you think that the success is the result of a wide vocabulary or that a wide vocabulary is the result of the variety of experience which success affords? Do you know the meaning of all the words used as examples in this article? Do you know the reading habits of any of the successful men and women of your acquaintance? How do you account for the high score which major executives make in the vocabulary test? In what ways may vocabulary influence one's life outside of business?

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Suggestions for Themes

Browse through your dictionary for a half hour. Follow out all the cross references of some item which takes your fancy; or begin with some section in the appendix, such as the meaning of our given names; or study the illustrations. Then write a theme on A Half Hour with the Dictionary. Experience has shown this to be an especially interesting and amusing theme subject for almost all students.

THOMAS MORE · LIFE IN UTOPIA

Consider More's statement that "the felicity of this life" consists in devoting whatever time may be spared from necessary occupation to the "free liberty of the mind and garnishing of the same." Are any modern trends in accord with this philosophy? What progress has been made in this century toward the six-hour day idealized by More? Do you think in general that our increased leisure is put to good use? Do you think it would be desirable for all people to wear the same fashion in garments? Do the games of the Utopians appeal to you? More asks his reader to consider, of those who labor, "how few be occupied in necessary works." Look around you for examples of what you consider unnecessary works today. Wherein do you find that you disagree with More's concept of Utopia?

Suggestions for Themes

Write a theme presenting your own notions on ideal dress for men or women. Write an account of your own idea of Utopia. A Prosperous Plowman Today. Employment Created by Unnecessary Works. Write a theme on the hobby you follow in your leisure time.

JONATHAN SWIFT · IN BROBDINGNAG

What is Swift's attitude toward suffrage? Do you agree with it? What is his criticism of the parliament? How do you interpret his statement that "laws are best explained, interpreted, and applied by those whose interest and abilities lie in perverting, confounding, and eluding them"? Can you think of present-day examples illustrative of his point? What things in contemporary American life do you think Swift would have been most likely to single out for satirical attack?

Suggestions for Themes

Write your own imaginary conversation with the King.

THOMAS CARLYLE · ON DEMOCRACY

To what does Carlyle refer in the phrase "this multitudinous efflux of oratory and psalmody, from the universal foolish human throat"? Do you agree with

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his opinion regarding the United States—that it could not be looked upon as a model for democracy (at that time) because it had not yet fought its battle? On what grounds does he object to suffrage? Do you agree with Carlyle that the number of “the wise and noble-minded” is not the majority? Explain what you think Carlyle means by the statement “The Universe itself is a Monarchy and Hierarchy . . . this is the model of ‘constitutions.’” Do you think the ballot box “raises the Noblest to the chief place”? In your opinion, does democratic government today prove Carlyle’s predictions true or untrue? At first reading, why does Carlyle’s essay seem to resemble so closely the speech of a spellbinder? What adjectives would you use to describe Carlyle’s style? Is Carlyle here really a propagandist against democracy? Study the essay to find the basic outlook on mankind which prompted Carlyle to write this piece.

Suggestions for Themes

Democracy in College. What Democracy Means to Me. What Democracy Implies. The Power of Minority Groups. I Believe the Real Political Issues Right Now Are . . . Start a political argument among some of your friends and record the conversation, with a running commentary of your own.

BERTRAND RUSSELL · THE TAMING OF POWER

Explain what Russell means by “The merits of democracy are negative.” How is tyranny possible within a democracy? Do you think the government of the United States safeguards its minorities? Do you agree that in order to remain democratic a government may have to restrict minorities that wish to alter it? Why must economic as well as political power be “tamed” in a democracy? Consider examples illustrating the difference between “ownership” and “control.” Do you agree that “public ownership and control of all large-scale industry and finance is a necessary condition for the taming of power”? Do you think Russell’s plan for educating children would be effective? He points out that wisdom consists in “independence of mind, somewhat skeptical and wholly scientific.” Can you interpret this definition? Do you think Russell’s essay reflects this wisdom?

Suggestions for Themes

Write an account of some co-operative enterprise you know. Write a theme explaining why you think that large-scale industry should (or should not) be owned and controlled by the public. On Being a Member of a Minority. Things I Now Own as a Citizen. The Taming of Organized Labor.

HERBERT AGAR · DEMOCRACY IN THE MAKING

This selection is frankly idealistic and deliberately challenging. Do you think the faults and shortcomings of our democracy give real cause for alarm? Do you

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think that our basic problems are economic or political? The greatest of all wars has taken place since Mr. Agar wrote this essay. How do you think it has changed our democracy? What ideas can you offer to help make our democracy a better one?

Suggestions for Themes

The Spiritual Affirmation of Democracy. Economic Problems We Must Solve. The American Town Meeting. Democracy in Frontier Days. Ways in Which I Think We Can Make Our Democracy a Better One.

JONATHAN SWIFT · THE ARMY IN BROBDINGNAG AND IN THE LAND OF THE HOUYHNHNMS

Do you think that confining the knowledge of governing "to common sense and reason, to justice and lenity, to the speedy determination of civil and criminal causes" is possible in the present world? What is the significance of the phrase "whether it be better to kiss a post, or throw it into the fire"? Do you believe the King's statement that, in time, reason must become corrupt under continued warfare? Why is the "gnnayh" particularly apt as a symbol? What contemporary qualities has Swift's style?

Suggestions for Themes

Wars That Were Justified. The "Gnnayhs" of Our Time. Swift's Satire. Using an item from today's newspaper for your subject, write an imaginary conversation with Swift.

THOMAS PAINE · THE CRISIS

Paine's claim that he had had a part in the successful outcome of the war was not an idle one; *The Crisis* papers had a profound influence in sustaining American morale during the long struggle. The problems of postwar adjustment of the country were certainly as great then as they are now. One of the main issues was the surrender of real power by the states to the new central government; hence Paine's repeated emphasis on the necessity for true union. Paine's prose style has great strength. Can you find its secret?

Suggestions for Themes

Thomas Paine—Patriot. National Character Is Much Easier Kept than Recovered. The Eminence We Now Stand On. The Remembrance of What Is Past. Present briefly your own ideas for the solution of the most important postwar problems.

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WILLIAM JAMES · THE MORAL EQUIVALENT OF WAR

Note that this essay was written on the eve of the First World War. Do you agree that "our ancestors have bred pugnacity into our bone and marrow, and thousands of years of peace won't breed it out of us"? Do you think experience since 1911 has shown "that the battles are only a sort of public verification of the mastery gained during the 'peace' interval"? Do you think that "militarism is the great preserver of our ideals of hardihood"? Do you agree with General Lea that nations are never stationary? Do you agree that a moral equivalent of war is the thing really needed to ensure peace?

Suggestions for Themes

Write a theme explaining why you think no lasting basis for peace will be found. Write a theme challenging the idea that lasting peace is impossible to achieve.

WILL DURANT · WHY MEN FIGHT

What do you consider to be the best reasons presented by the author to explain why men fight? Are there any statements in this article with which you disagree? What is the contribution of the "business cycle" to the causes of modern war? What does the word "nostrums" mean? Is the birth rate in the United States rising or falling? Why is the birth rate so closely related to the problems of war and peace? Do you think the author would prefer the organization of the United Nations to his own federation of the English-speaking peoples of the world?

Suggestions for Themes

My Explanation of Why Men Fight. Good Generals and Bad Statesmen. Why I Believe in War. The Basic Causes for War Are Economic. I Disagree with Will Durant.

IRVING LANGMUIR · AN ATOMIC ARMS RACE AND ITS ALTERNATIVES

The thinking of the scientists who helped create the atomic bomb has had weight with the world's diplomats in their search for effective means for controlling its use. Hence this article has lasting interest. Do you agree that Russia is capable of producing the atomic bomb very soon? Do you think the bomb can be truly and effectively outlawed by international agreement? Do you agree that freedom of travel and wide exchange of books and papers between Russia and the United States would be one of the best means of promoting peace? Do you

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agree that we cannot insist that our concepts of freedom and democracy shall prevail everywhere? Do you agree that the commercial use of atomic power as a substitute for coal and oil will for many years be a matter of trivial importance as compared to the dangers that might result in the existence of atomic bombs?

Suggestions for Themes

Write a theme condemning or justifying America's use of the atomic bomb against Japan. Write a theme explaining why you think the atomic bomb can (or cannot) be truly outlawed. Write a theme explaining why you think a basis for lasting agreement with Russia can (or cannot) be reached.

ARCHIBALD MacLEISH · VICTORY WITHOUT PEACE

MacLeish points to the differences; what similarities can you see between the period following the First World War and the present? Do you agree that these parallels are coincidence? What are the policies which would tend to establish two poles of power? Why do you think we continue to mistrust the future? Do you agree that we fought the war in a division of mind as to the kind of world we expected to reach? Did you expect, or hope, to return to the world we had? Toward what dangers does MacLeish see us slipping? What does he mean by a nation's opposing itself to the aspirations of an age? What do you think MacLeish means by the "American Proposition"? Do you think that our ideals are in danger?

Suggestions for Themes

America's Leadership in the Postwar World. The Real Freedoms the World Seeks. Our Confidence in Peace. The "American Proposition." The General Freedom of the People.

FRANCIS BACON · OF LOVE

How do you interpret Bacon's statement, "The stage is more beholding to Love, than the life of man"? Do you agree? Do you think that "it is impossible to love and to be wise"? How do you account for the "inward and secret contempt" held by one who does not respond to another's love? Do you agree that love should be wholly severed from "serious affairs and actions of life," or do you believe love should share all great problems? Do you think Bacon's attitude toward love is appropriate to this age, or does it seem to reflect the age in which he lived?

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Suggestions for Themes

Write a short article showing how you think romantic illusions are fostered by the movies. Write a letter to a friend explaining frankly why you think college students should (*or should not*) marry while in school. Marrying for Companionship. A Golden Wedding.

FRANCIS BACON · OF MARRIAGE AND SINGLE LIFE

Does your observation of life make you agree with Bacon's statement that a wife and children are "impediments to great enterprises"? What do you understand "enterprises" to include? Do you think an artist's work is hampered by a family? a businessman's? Do you agree that single persons are more cruel and hardhearted "because their tenderness is not so oft called upon," or do you think married persons may just as easily become cruel and hardhearted because their devotion and concern tend to center about the family? Do you believe marriage more desirable than liberty? Is this essay as applicable today as it was in Bacon's time?

Suggestions for Themes

Explain the factors you think are most important for a happy marriage. Write a sketch characterizing a happily married couple you know. Why I Should Like to Marry (*or Remain Single*). Marriage or a Career? Marriage for Money. The Joys of Being Single. The Right Age to Marry.

JOSEPH ADDISON · THE BEAU'S HEAD

In describing the beau's head, Addison points out that the "pineal gland . . . smelt very strong of essence and orange-flower water." What picture does this create in the mind of the reader? What is the point of the satire concerning the "large cavity on the right side" of every beau's head? How do you interpret the meaning of Addison's statement that the "elevator muscle" of the beau's eye did not seem to have been used? Ordinarily the thought of a man's being killed by the "blow of a paving shovel" is depressing. Why is it amusing in this essay? How should you describe Addison's style?

Suggestions for Themes

Masculine Vanity. Write a short article for the college newspaper explaining how to make a "date" (*or how to break one*). A Twentieth Century "Beau's Head." The Ideal College Man. Beautiful Men in the Movies.

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JOSEPH ADDISON · THE COQUETTE'S HEART

Do you think Addison's description of the coquette's heart an accurate one? Might some of his discoveries in this anatomical dissection have been made in hearts other than that of the coquette? What is Addison's point in the use of the "weatherglass"? Do you agree, in general, with his theory that the man who laughs loudly is a coxcomb and that he who looks serious is a man of sense? In how many feminine hearts do you think the "flame-colored hood" lies "first and uppermost"? Do you believe that women so unfeeling as this type described by Addison exist? Should you like to meet and talk with a man like Addison?

Suggestions for Themes

Judging a Woman by Her Taste in Clothes. Campus Styles Are Peculiar. On Women's Hats. Addison Dissects a Coquette's Heart Today. Write a sketch trying to catch typical scenes before a college dance.

JOHN HENRY NEWMAN · PORTRAIT OF A GENTLEMAN

Do you think the definition of a gentleman as "one who never inflicts pain" a good one? Do you believe a man who "carefully avoids whatever may cause a jar or a jolt in the minds of those with whom he is cast" develops or weakens his own personality? Which do you think has actually been exalted by the world, the vivid and dynamic temperament or that of modest nobility? Newman condemns those who, in an argument, "like blunt weapons, tear and hack instead of cutting clean . . ." How do you interpret his meaning? How could a true gentleman, although he may hold no religion, "seem like a disciple of Christianity itself"? Could this essay have been written by a man who was not a gentleman? In your opinion is the essay a portrait of an impossibility or of a true ideal which is to be striven for?

Suggestions for Themes

Write an article characterizing campus manners, faculty and student, good and bad. A True Gentleman I Know. Manners of Motorists. Bad Manners Observed in a Department Store. A Gentleman Is Not a Fop. Things I Wish the Girls (or the Fellows) Wouldn't Do.

ROBERT LOUIS STEVENSON · ON MARRIAGE

Is it your opinion that matrimony is a shadow which "waits, resolute and awful, at the cross-roads"? Do you agree that "friendships of men are vastly agreeable, but they are insecure"? Does it seem to you that marriage narrows rather than broadens a man's life? Stevenson says there is less of this danger for

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a woman. Do you think his statement as true now as it was in the beginning of this century? If you had made up your mind to marry and "once talked yourself fairly over," do you think you could "pull it through" with almost anybody? Stevenson says it is more important that a wife be able to share a joke with her husband than that she have an intellect equal to his. Do you prefer to see a woman intellectually inferior to her husband? Do you agree with Stevenson's opinion that "marriage, if comfortable, is not at all heroic. . . . In marriage, a man becomes slack and selfish, and undergoes a fatty degeneration of his moral being"? Whose philosophy of marriage do you prefer, Bacon's or Stevenson's? Why?

Suggestions for Themes

Characterize a person you know who made an unusual marriage. Choose some one of Stevenson's ideas expressed in this essay and take issue with it. The Difficulties of Expressing One's Frank Opinion at All Times. "Spring Winds Will Sow Disquietude . . . and the Whole World Keep Calling and Calling."

GEORGE SANTAYANA · FRIENDSHIPS

How do you interpret Santayana's statement "people are friends in spots"? Do you agree with Santayana's conception of true friendship? Do you think that friendship can "even bear not to be mutual"? From your own observation, how many true friends does the average person have? Santayana points out that we should not be jealous if we were "simply merry." Does your experience support his statement? Do you think this essay depressing?

Suggestions for Themes

Write an entry for your diary explaining to yourself why you like to be alone. Write a not-sentimental letter to a close friend recounting the things in your friendship which have meant most to you. An Apology for Gregariousness. On Being Truly Merry.

JOHN DEWEY · DOES HUMAN NATURE CHANGE?

The author mentions cannibalism, slavery, and payment of interest as examples of ideas which have been fundamentally changed. Can you think of others? What is the mistake commonly made when it is asserted that a proposal won't work because it is against human nature? What further changes in human nature do you think are desirable? What proposals concerning the future of our race do you think Dewey had uppermost in mind when he wrote this selection? Why does Dewey think that great changes cannot be brought about by sheer violence?

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Suggestions for Themes

Ask your history instructor to suggest some interesting change in customs or ideas which you can look up in the library, and write an account of what you learn. Choose some topic on which your own ideas and outlook have changed completely and explain how the change occurred. Write an article explaining the further changes in human nature you think desirable and in every case point out how you think the change could be brought about.

HARRY EMERSON FOSDICK · THE PRINCIPLE OF SELF-ACCEPTANCE

Note that the opening sentence not only arrests attention but is closely related to the point of this essay. Try to achieve a similar effect in writing the theme this essay suggests. Do you think there are, at any given age, wide differences between people's estimates of their "actual and desired selves"; or do you think we are all very much alike? Do you agree that parents are often responsible for serious conflicts in their children? What other pressure does Dr. Fosdick think is often important? Do you agree that you can often detect what people deeply wish they had by observing what they are cynical about? Do you think the author's conclusion is a sound one?

Suggestions for Themes

This essay is likely to prompt the reader to reconsider not only the conflicts of his own personality but those of his friends. Choose any part of this selection which appeals to you and use it as the subject for a theme.

BENJAMIN FRANKLIN · ON SETTING WORDS TO MUSIC

What do you think of Franklin as a music critic? Is Franklin's suggestion that his brother should have turned to a country girl with a good ear made seriously? Can you think of any song likely to encourage industry and frugality? Do you think popular songs today introduce the defects and absurdities of common speech as so many virtues? Do you think that words in modern songs are "only a pretense for singing"?

Suggestions for Themes

Rewrite this selection as you think Franklin might have written it if he were criticizing popular music today.

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CHARLES LAMB · A CHAPTER ON EARS

What is particularly modern about the opening of this essay? Lamb remarks that after sitting through an Italian opera he rushed out into the streets "to solace myself with sounds which I was not obliged to follow." What does he mean? Do you sympathize with his objection to music? What criticism does he make of his friend the organist? Which passage in the essay do you think most amusing? Do you think the essay capable of appealing to music lovers as well as to those with "no ear"?

Suggestions for Themes

Write an informal essay on your own collection of phonograph records. Write a critical article on the subject of music on the radio. If you have an opportunity to observe one, write a description of a musical audience. Write a theme on music criticism in your daily paper.

JOHN RUSKIN · GREATNESS IN ART

What is meant by the "language" of painting or poetry? What besides perfection in language is the aim of true art? Ruskin emphasizes the fact that it is "not by the mode of representing and saying, but by what is represented and said" that greatness in art must be determined. Do you think that this is a Victorian notion, or is it valid criticism? What criticism is made in the essay of the Dutch school? Do you agree with Ruskin's definition of the greatest picture, "that which conveys to the mind of the spectator the greatest number of the greatest ideas"? What does the word "ideas" mean? State in simple language your own opinion of what constitutes greatness in art.

Suggestions for Themes

Write a paper explaining why you think pictures should be kept in folders for study when the mood is right rather than hung on walls at all times. Spend an hour in a local art gallery (or at a store which retails prints) and write a frank account of your reactions. Choose a painting you especially like and, after consulting the college library, write an account of its history. A Painting Which Has "Language" but No Thought. Victorian Fondness for Pictures Which Told Stories. How Murals Are Painted.

JOSEPH CONRAD · PREFACE TO *THE NIGGER* *OF THE NARCISSUS*

Conrad defines art as "a single-minded attempt to render the highest kind of justice to the visible universe, by bringing to light the truth . . ." How do you interpret the meaning of the word "truth"? Have you discovered any simple truth

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about the world around you through the medium of art? What is meant by "realism," "romanticism," and "naturalism"? Conrad distinguishes between the scientist and the artist. Do you think his distinction is sound? Do you agree that "all art . . . appeals primarily to the senses"? Would you call a beautiful painting art, if it had "perfect blending of form and substance" but did not appeal to the emotions? Why does Conrad wish "to make them [men] pause for a look"? What does he want to make them see? Does Conrad think that the real purpose of art is not to please but to teach?

Suggestions for Themes

Read a short story by Conrad in the light of this *Preface* and show how you think it illustrates his points. Write a theme attacking (*or* defending) sentimentalism in music, art, or literature.

JOHN HOLMES · THE GREAT RICH VINE

Do you agree with Holmes's definition of a poet? What is meant by the statement that a poet's "borders are forever shifting"? Holmes quotes Keats's statement that the poetic character "has as much delight in conceiving an Iago as an Imogen." Explain the meaning of this as you understand it. Do you agree that great poets are "physically and temperamentally the toughest" people in the world? Why must a poet's style be "his own or nothing"? How do you interpret Whitman's statement that "the acting is to the actor and actress, not to the audience"? Holmes says that the poet wants his poetry to be "an exact representation of his own peculiar inner rhythm." What does he mean by "inner rhythm"? How does Holmes's style add to the effectiveness of his critical observations?

Suggestions for Themes

Submit some of your own poetry in place of your regular theme. Write an adverse criticism on the use of rhyme in popular songs. Write a short essay on your favorite modern poet. Write an article presenting your own definition of poetry.

CHARLES W. FERGUSON · ART FOR OUR SAKE

Ferguson points out that even capable artists admit that surrealist painting is "beyond their depth." How do you explain this situation? Do you agree that surrealist and dada art are merely a reflection of the mental and emotional confusion of people today? Do you think it deserves to be called art? What is your reaction to Gertrude Stein's poem beginning "Sweet sweet sweet . . ." ? How is this trend, which emphasizes confusion, reflected in music, in novels? How may the age be considered responsible for this trend? Do you believe that art is still going in that direction, or that it is turning away? Ferguson quotes Schiller as having said that you could tell an artist by what he leaves out. Explain what is meant.

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Suggestions for Themes

Write an article on some aspect of art in contemporary advertising. Photo-montage—How It Is Done. America's Weakness for Fads. Surrealist Painting. Reading Gertrude Stein. Contemporary Sculpture.

GRANT C. KNIGHT · WHAT MAKES A BOOK GREAT?

Have you found book reviews helpful in guiding your own reading? Do you think the various "book clubs" perform a useful service? Do you agree that the "heroic principle" is an essential element of a great book? Why do you think some books enjoy enormous popularity and then drop rapidly into oblivion? Do you think truly great books are necessarily popular? What contemporary books do you think are likely to stand the test of time? Can you think of other ingredients, not mentioned by the author, which make a book great?

Suggestions for Themes

Choose some contemporary book which you think will stand the test of time and explain why you think it will do so. Select some recent best seller and explain why you think it will not long be remembered. Using Mr. Knight's title, write an article developing your own ideas.

DEEMS TAYLOR · THE TOLERANT EAR

Do you find yourself in sympathy with the radio listener whose letter is quoted? If so, does Mr. Taylor satisfy you with his advice? Do you think experimentation in music is more general now than it has been at any time in the past? The composers, says Mr. Taylor, are busy inventing a new musical language. Do you think the ideas of our time require them to do so? Do you think that the architects, poets, and artists are all busy creating a new language of their own, too? Is the need for a new means of expression common to all the contemporary arts, then, or only to a few? Or do you think that innovations in one form have led to mere imitation in another? Do you think there is much searching for novelty for its own sake? Do you agree that many of us have been too hesitant to express our genuine likes and dislikes?

Suggestions for Themes

Write a letter to Deems Taylor, telling him why you disagree with him. Write an article pointing out how the search for a new language is common to all contemporary art forms and strive to explain the reasons for it. Following Mr. Taylor's directions, listen several times to a piece of contemporary music on your phonograph and write a careful criticism of it.

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FRANCIS BACON · SALOMON'S HOUSE

How do you interpret Bacon's statement that the "end of our foundation is the knowledge of causes and secret motions of things"? Do you agree that this is the "end of our foundation"? How has modern science made use of the "violent streams and cataracts" which Bacon said could "serve us for many motions"? What, in the present age, is comparable to the "chambers of health" described in the essay? Do you agree that the "dissection and trials" of beasts is of great benefit to mankind? Bacon spoke of "heats in imitation of the sun's." How has modern science nearly realized this vision, and to what uses has the discovery been put? What parts of Bacon's imaginary picture have not yet been achieved by man? Do you think Bacon deserves to be called a prophet of modern science, or do you think that others in his day could have made the same prophecies? Try to make your own prophecies concerning the world three centuries from now. Does the attempt increase your admiration for Bacon's vision?

Suggestions for Themes

After consulting a few convenient sources, such as the encyclopedia, write an article trying to account for Bacon's remarkable scientific vision. Write an article comparing Bacon with Jules Verne. Write a critical essay on the various comic strips which picture the future.

THOMAS HENRY HUXLEY · THE METHOD OF SCIENTIFIC INVESTIGATION

The editors of your text have included more than one selection from some authors (such as Huxley), partly because of their intrinsic worth, and partly to enable you to compare their work on different subjects; as you, presumably, compare your own success with different themes. Does this essay strengthen your interest in science? How should you explain the difference between induction and deduction to a high-school student? Describe the train of reasoning known as a syllogism. Huxley says, "You may have hypotheses, and hypotheses." What is his implication? In facing personal problems, one is often forced to make a decision which will affect one's whole life. Do you think scientific reasoning in such a case is possible? Do you think it desirable? What devices does Huxley use to make his exposition of his subject interesting?

Suggestions for Themes

The Only Mystery I Ever Solved. The Science Course I Like Best. Emotional Decisions I Have Made. Why I Should Like to Be a Geologist. An Important Scientific Investigation Now in Progress. On Dissecting a Frog.

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ROBERT L. DUFFUS · THIS UNSCIENTIFIC AGE

Duffus states in the beginning of the essay: "Not only is our generation not scientific; it is less scientific than the generation which preceded it." How do you explain his meaning? Do you agree with the statement? Do you think that the man "who operates a motor car or twiddles the dials on a radio set" is more scientific than his ancestor "who drove a horse and played the fiddle"? What criticism does Duffus make of the modern city? Explain his statement that we are like the "barbarians who marched into Rome during the last day of the Empire." Do you agree that war is the "negation of science"? What reasons do you have for your opinion? After reading this essay, do you believe that this is a scientific age?

Suggestions for Themes

The Scientist and His Laboratory as Portrayed by the Movies. This Emotional Age. The Place Where I Should Like Best to Live. The Best Book on Science That I Have Read. The Housewife Wrestles with Science. Choose some everyday invention whose principles of operation happen to be familiar to you (the fluorescent lamp, the self-starter on a car, a radio-detector tube) and ask a series of people to explain to you exactly how it works; report your findings.

A. S. EDDINGTON · NATURE OF THE PHYSICAL WORLD

Do you have difficulty grasping the idea that all "solid" objects are really composed mainly of empty space? How does the idea explain the seeming paradox that the X ray can "see" through solid objects? If all matter is formed of electrical energy, how is it that bread is different from cheese? What does the author mean by "a world of shadows"? What does he mean by "the alchemist Mind who transmutes the symbols"? What do you think may be the "wider landscape" to which the studies of physicists may lead?

Suggestions for Themes

Describe some experiment in physics or in chemistry which has especially interested you. New Ideas in the Use of Plastics. Radar. Television in Full Color. New Uses for the Vacuum Tube. Write a short article tracing the discoveries which have led to our present conception of the nature of the physical world.

CROSSROADS

Time magazine has a highly individual style. Study this article as a piece of writing. What are its salient characteristics? Note that this article serves as a companion piece to the concluding selection in the next section.

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What is the speed of light? What, then, is the true meaning of the equation $E = mc^2$? Does this help you—better than any photograph—to understand the tremendous forces involved?

Suggestions for Themes

Write a theme on any subject related to the atomic bomb.

ALFRED NORTH WHITEHEAD · RELIGION AND SCIENCE

The organization of this selection merits study. Jot down the steps by which the argument is developed. You will see that from beginning to end the discussion never wanders from a straight line of thinking. What is the purpose of the illustrative examples from the history of religion and of science? What do you consider the most effective section of this chapter?

Suggestions for Themes

Write a careful, honest analysis of your own attitude on the proper evaluation of the teachings of religion and of science. Write an article proposing specific ways in which religion can regain its old power. Write a theme challenging Whitehead's assertion that religion has lost its old power. Write a theme challenging any other assertions made by the author.

WALDEMAR KAEMPFERT · BLUEPRINT OF A FUTURE SUBURB

You may wish to reread Bacon's predictions for the future before concluding that Mr. Kaempfert's suburb is an impossible place. Do you agree that all these things are merely logical developments of discoveries already made? Do you think life in such a suburb would be pretty dull? Do you think the students of Bacon's time would have regarded our life today as too tame for endurance? Even if you do not fancy the prospect of such a world as the author portrays, do you agree that cheaper power will fashion the planet to suit society?

Suggestions for Themes

The atomic pile has made cheap, unlimited power a present reality. Write your own blueprint of the world you can reasonably expect to see in your lifetime. Write an article on any topic connected with popular science which interests you. Write an article on newly invented "gadgets."

THOMAS JEFFERSON · FIRST INAUGURAL ADDRESS

What were the immediate problems facing Jefferson's new administration? Is the implication in his address that the election campaign had been a bitter one

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in accord with the facts? Whom had Jefferson defeated? What is the meaning of the reference to those who would wish to change the republican form of government? Why is Jefferson's statement of general principles of our government which is embodied in this speech of historical importance? Do you think the personal modesty Jefferson expressed was honestly felt?

Suggestions for Themes

Thomas Jefferson was a remarkable man. Write an article on some one of his many interests or achievements. Write a companion article for this address, presenting a sketch of the scene and of the political issues of the day.

ALEXANDER HAMILTON · UTILITY OF UNION

There was, of course, strong opposition among many of the colonists to the formation of a central government, and especially to the surrender by the new states of sufficient sovereignty to make a central government effective. Note how skillfully Hamilton puts his finger on that sensitive nerve—the pocketbook. One of the most interesting points about this paper is the clarity of vision it displays. If we sometimes marvel at the skill of the little group of men who framed our Constitution, this paper written by one of them may help to account for it.

Suggestions for Themes

Write an article discussing the part the *Federalist* played in our early history. Write an article on the early American Navy, showing how Hamilton's predictions were soon realized. Write a short account of Hamilton's public life.

WALTER LIPPMANN · THE GENERAL ORDER OF THE NATIONS

What does Mr. Lippmann mean when he asserts we have been without a foreign policy for fifty years? Do you agree with his analysis of our fundamental interests? Do any of the events since this paper was written in 1943 tend to invalidate his argument? Is Russia's attitude and true intentions the key to this problem? Or is our policy (or lack of it) equally important? In what ways, if any, has the atomic bomb changed the problem presented by the author? How does Great Britain's foreign policy affect us?

Suggestions for Themes

Write your own analysis of the present world situation. Write a short article on the principal postwar policies of the American State Department. Present your own explanation of Russia's policies in central Europe since the German surrender.

STUDENT HELPS AND THEME SUGGESTIONS

VERA MICHELES DEAN · A JOB TO BE DONE

What progress has been made by the United Nations toward establishing an effective international organization? Looking back to earlier selections in which the colonies were urged to form a strong national government for the United States, what parallels do you see with the problems of forming a world organization today? Do you think the author states the present problem fairly and completely? What do you think are the principal remaining difficulties to be solved?

Suggestions for Themes

Write a theme presenting your own views on some part of the work of the United Nations.

ALBERT EINSTEIN · THE REAL PROBLEM IS IN THE HEARTS OF MEN

The author asserts that a new type of thinking is essential if mankind is to survive. What evidence do you see that the old type of thinking continues? What actual progress has been made toward solving the international problems created by the discovery of atomic energy? Do you agree that the atomic bomb is the central problem in America's relations with the rest of the world? Do you consider the author's conclusions wholly idealistic or entirely practical?

Suggestions for Themes

Write an article explaining the kind of world authority or world state you think is necessary if the atomic bomb is never again to be used in warfare. Read your daily paper carefully and write a theme showing how its contents prove Albert Einstein's point that a new type of thinking is indeed necessary.

CHARLES H. HASKINS · THE LIFE OF MEDIEVAL STUDENTS AS ILLUSTRATED BY THEIR LETTERS

What is the primary purpose of the research paper? How does it differ from other types of expository writing? How do the footnotes allow a rapid judgment of the thoroughness and impartiality of the work? Why do you think strict adherence to some established form of footnotes is desirable? As a college student, why is mastery of the form and documentation of a research paper of practical importance to you?

You should realize that the research papers printed here illustrate the form ordinarily followed in history and in English only. Both the format and the methods of documentation are somewhat different in, for example, chemistry or economics. But once you have mastered the fundamental steps by which data are collected and organized, the choice of external form is not difficult. If you plan

STUDENT HELPS AND THEME SUGGESTIONS

to be a chemist, you will find that even in that one field every professional journal has its own format. Your English instructor likewise must decide what professional journal he wishes one of his articles to appear in and then write it for that publication. Most journals publish their own "form sheet" in each issue or have it available in printed form on request. The reason for all this is a good one: the professional magazines in all fields are tremendously crowded; yet they supply the only effective means by which professional men and women can benefit by each other's work. Only a rigid regimentation on the preparation and processing of material stands between the scholarly world and a breakdown of the whole reporting system.

Suggestions for Themes

Write a research paper on some topic which genuinely interests you. Narrow its limits so that you can make a really thorough investigation of the ground you do cover.

CAROLYN BURWELL · THE STORY OF THE CHRISTMAS SEAL

The present paper is reprinted as an example of satisfactory student work in Freshman English. It is not, of course, professional work in either its background or its organization, but students should be encouraged to do painstaking research projects within the time allotted by discovering that students everywhere are finding for themselves topics for investigation which are of universal interest. Almost any topic, from the story of the Christmas seal to the methods of manufacture of a lead pencil, can be developed into an informative research paper if the student will take the trouble to use to full advantage the research facilities of his college library. Note here that the student has consulted periodicals as well as books. Originally, since the paper was submitted in manuscript form, the footnotes were gathered together and placed at the end. This practice is followed in many professional research studies of book length and is a perfectly legitimate form of documentation.

HOWARD MUMFORD JONES · ROSE WILDER LANE'S FREE LAND

How does the first sentence establish the point of view of the entire review? Make a list of other points about the novel mentioned by the reviewer. How are these related to the central theme of the review? What is the implied tribute in the reviewer's comment that he dug himself "out of the snow for the nth time"? Study the use of topic sentences. How do they contribute to the clarity and vigor of this review? Does the reviewer make you want to read the book? Does he tell you all you need to know about the plot? Does this review give you a better idea of what the book is like than would a careful summary of the plot, no matter how complete? How much of the author's plot is it fair and sporting for the reviewer to reveal?

STUDENT HELPS AND THEME SUGGESTIONS

Suggestions for Themes

Write a review of a novel.

LOUIS UNTERMAYER · OGDEN NASH'S *I'M A STRANGER HERE MYSELF*

Who is Louis Untermeyer? Do you think this review is on the whole friendly and constructive in its criticism? This review is a critical evaluation of Nash's work as a whole. Do you think Mr. Untermeyer has rather neglected the book he set out to review, or do you think an evaluation of a new book in terms of its author's former work is the fairest possible approach? Note how carefully Mr. Untermeyer has organized his critical remarks under separate topics: line length, rhymes, etc. Do you think this strict organization in a review is helpful to the reader? The good reviewer never quotes for the mere sake of filling space, a principle the student will do well to adopt in his own work. How does Mr. Untermeyer apply his quotations to the subject of the paragraph in which they appear? Mr. Untermeyer is famed for his caustic wit. Do you find evidence of it here? If the reviewer meant to be friendly, his review should make you want to read the book in spite of any adverse criticism included in the review. Do you now desire to read Mr. Nash's volume?

Suggestions for Themes

Write a review of a volume of poetry.

BASIL DAVENPORT · DAPHNE DU MAURIER'S *REBECCA*

Note that each book presents to the reviewer an individual problem. A review must be by its very nature a highly personal estimate of a book's worth. The student will certainly profit by a careful study of the kinds of things the professional reviewers single out to comment upon; but he must not suppose that the same topics would be important in criticizing all books. What is the purpose of the first sentence of this review? Does the long first paragraph seem to you well organized? Does the reviewer stop at exactly the right point in his summary of the plot? How is the second paragraph linked to the first? What idea is restated throughout the review? Do you think that character and setting are given too little attention by the reviewer? Why do you think the reviewer begins so many sentences with the word "but"? Do you consider this an interesting and skillfully written review? Why?

Suggestions for Themes

Write a review of a current novel.

STUDENT HELPS AND THEME SUGGESTIONS

CLIFTON FADIMAN · OSA JOHNSON'S *I MARRIED ADVENTURE*

In what ways does this review differ in style from the other reviews you have examined? Do you think that Mr. Fadiman's emphasis on Mr. and Mrs. Martin Johnson themselves, rather than on their adventures, is a sound approach when reviewing a book of this type? Why? Mr. Fadiman neglects to tell us where the book begins and how it ends. Has he overlooked important points? Pick out the sentences in which the reviewer registers adverse criticism. What does Mr. Fadiman say in praise of the book? Restate in your own words the evaluation of the book given in this review. What does the word "feral" mean? How does Mr. Fadiman's use of unexpected words add to the reader's enjoyment of this selection?

Suggestions for Themes

Write a review of a book of travel or adventure. Write a review of an autobiography.

DENVER LINDLEY · ROBERT VAN GELDER'S *WRITERS AND WRITING*

Do you think the reviewer has made too extensive use of quotation or do you think the review gains in interest by it? You have perhaps discovered in your own work that a judicious use of quotation is a nice problem. Can you formulate any general rules? Keeping in mind the basic purpose for which book reviews exist, how much should the reader be told about a book? Are there any points which should always be covered? In fairness to the author, what points about a book should not be told?

Suggestions for Themes

Write a review of a book of nonfiction.

DAVID M. POTTER · DOUGLAS SOUTHALL *FREEMAN'S LEE'S LIEUTENANTS*

This is a scholar's review of a scholarly book. In what ways does the review differ from the others printed in this section? What is your exact impression of the book from reading the review? Make a brief outline of its structural organization. To what points has the reviewer given particular emphasis?

Suggestions for Themes

Write a review of a biography.

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